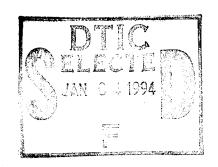


# SURVIVABILITY - SUSTAINABILITY - MOBILITY SCIENCE AND TECHNOLOGY SOLDIER SYSTEM INTEGRATION

TECHNICAL REPORT NATICK/TR-95/011



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# THE 1992 - 1993 ARMY FOOD PREFERENCE SURVEY

By Robert A. Kluter Larry L. Lesher\* Gail T. Vanca\*

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December 1994

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#### PREFACE

This survey was conducted to provide U.S. Army menu planners and ration developers with an updated data base of food preference and serving frequency information obtained from Army consumers.

The effort was titled Military Food Preferences A93-2 and was undertaken under Project 1L162724AH99 - Joint Services Food/Nutrition Technology, Task BF - Human Factors of Combat Rations.

The Operational Forces Interface Group of the Consumer Liaison Division, Advanced Systems Concepts Directorate and contract personnel from GEO Centers, Inc. assisted in the administration and collection of questionnaires from personnel at the following sites: Forts Benning, Bliss, Bragg, Campbell, Ord and Stewart as well at Scofield Barracks and OCONUS in Germany.

Ruth Roth and Harry Lynch of the Consumer Research Branch, Behavioral Sciences Division, contributed significantly to the project by processing the nearly 2,000 filled-in questionnaires collected. They assisted in: inspection and validation, "cleaning up" valid questionnaires to assure proper reading by the optical scanner and manually adding codes required before scanning and operating the scanner. Their efforts are gratefully acknowledged.

This report covers the period October 1991 to December 1993.

#### The 1992-1993 Army Food Preference Survey

#### INTRODUCTION

The most recent Natick-administered Army food preference survey was conducted in the early 1970's (Meiselman et al, 1972). More recently, a contractor (Nordlie, 1983) conducted a four DOD Service survey in 1982. In it, 885 Army food preference and frequency responses were averaged with personnel from the other three Services, and analyses of variance were computed to compare Army preferences statistically with the others. Since these surveys, changes have occurred in U.S. dietary habits as evidenced by the trends indicated in Table 1. For example, consumption of red meat has dropped off since the 1965-69 base period, while consumption of poultry, fish, vegetables and cereal products has increased. Thus, the 18 year olds entering the military services today are likely bringing with them food preferences differing from respondents to previous surveys.

TABLE 1. Percent Change in Consumption of Selected Commodities between the 1965-69 and 1985-87<sup>a</sup>

Commodity	Percent Increase (Decrease)
Juices, Citrus	68.5
Poultry	66.0
Soft Drinks	60.5
Fishery Products	35.8
Fats & Oils	24.6
Sugar & Sweeteners	24.5
Vegetables	24.2
Fruits, Fresh	19.3
Flour & Cereal Products	17.0
Dairy Products, All	(1.4)
Beef	(2.0)
Red Meats, All	(2.5)

Henneberry and Charlet, 1992. Based on USDA data - see References. 1965-69 = Base Period

In Table 1, the 1965-69 and 1985-87 periods, respectively, preceded the 1972 and the present Army food preference surveys. The 20-year interval is marked by dramatic increases in per

capita consumption of citrus juices, poultry, soft drinks and seafood. According to Rabinowitz, 1991, the trends considered favorable in terms of nutrition and health are increaseds consumption of fresh fruits and vegetables; those considered unfavorable are increases in consumption of fats and oils and sweeteners. Increases in fat consumption are attributable in part to dramatic increases in snack food consumption, particularly potato chips. Sweetener consumption increases are attributed in part to increased use of corn sweeteners and sugar substitutes in soft drinks. Although Table 1 indicates a slight decrease in the all-dairy product category, Senauer et al, 1991, indicates that considerable change occurred within it. For example, cheese and frozen yogurt consumption rose sharply as fluid milk consumption, particularly whole milk, dropped.

The preceding discussion focuses on the main trends in food habits as evidenced by U.S. consumption statistics. A high proportion of early 1990's Army consumers were born as these trends were unfolding. A critical question that the present food preference survey attempts to answer is to what degree these trends affected attitudes of present-day soldier consumers, as reflected in preferences, not only for those foods surveyed previously, but also for foods reported to have become popular in the U.S. since the last Natick survey. It is essential that garrison and operational ration menu decisions be based upon updated food preference information. Otherwise, foods may be retained that have become unpopular or new foods that consumers desire may not be introduced.

This project had three main objectives: (1) Review literature on food preferences and U.S. food trends; (2) construct and administer a food preference survey questionnaire at Army bases in representative geographical areas; (3) based upon the food preference and frequency data generated, develop recommendations for the benefit of Army food planners, menu writers, product developers and others concerned with institutional food service.

#### METHODS AND PROCEDURES

#### Questionnaire Development.

The questionnaire was developed in four stages: (1) reviewing alternative scales and formats for obtaining preference and frequency responses; (2) writing and selecting demographic and general food questions; (3) collecting, screening and selecting food names to be surveyed; (4) reproducing and collating the final questionnaire.

Rating Scale and Response Format. The 9-point hedonic scale has been used since the initiation of food preference surveying in the 1950's (Peryam et al, 1960). This scale was again selected since we wanted to compare present with past preferences for those food names resurveyed. To estimate frequency, a two-column format was used (Meiselman et al, 1974). Note in the questionnaire reproduced in Appendix G that respondents were asked to mark one integer (0 to 3) in the lefthand column and another (0 to 9 in the righthand column. Of the alternatives, this format (1) allowed respondents to indicate any number of days per month without omission (constrained from 00 through 30); (2) was comparable with previous data bases using the same format; and (3) enabled both preference and frequency responses to be optically scanned.

<u>Demographic and General Food Questions</u>. Characteristics were chosen to allow comparison of respondents to demographics of the present Army enlisted population. Seven were chosen: (1) rank, (2) gender, (3) age, (4) length of service, (5) educational level, (6) racial/ethnic background and (7) geographical area lived the longest.

Two general guestions were developed to determine (1) the most popular cuisines or general cooking styles and (2) desired serving frequency of various food groups. The list of cuisines was derived from earlier questionnaires and updated to reflect the emergence of cuisines not previously well known to American consumers. Seafood and natural foods were eliminated from the list because they were food groups and not cooking styles. They were included instead as groups in the serving frequency question. Spanish was eliminated from the list because it remains relatively unknown in the U.S. Thai, Indian, Middle Eastern and Cajun/Creole were added because they have become more prevalent in the U.S. since the last Army surveys. For the serving frequency question, twenty-seven general food groups or food preparation styles were identified, of which 12 are commonly thought to have positive connotations for diet and health. The rationale was to guide ration developers and menu planners in determining which groups to emphasize or deemphasize in future menus.

Two other questions were considered for inclusion: (1) to assess respondents' concern for their own diet and health and (2) their attitudes toward field rations. Because the first area has been investigated extensively elsewhere and because we desired to have questionnaire responses indicate general food attitudes, rather than preparation or processing methods, the questions were not included.

Development of the Food List. The following sources were consulted to develop an exhaustive list of food names: (1) current Army Master menus (Anonymous); (2) the Armed Forces Recipe Service card file (Anonymous, 1987); (3) restaurant industry menu surveys/census; (4) traypack and Meal, Ready-to-Eat field ration menus (5) a food list compiled by Aylward (1991) as part of a Desert Storm program to screen commercially-available foods for Meal, Ordered Ready-to-Eat (Contingency Test); (6) published food trends assessments/reviews and (7) new recipes from institutional trade journals.

All food names deemed worthy of consideration were listed. Most were specific preparations and not general categories. The initial list, consisting of 1,068 items, was alphabetized and distributed to Natick recipe and ration developers for comment. A invitation to military and food processor members of the Research Development Associates to suggest food names was printed in its newsletter. Because past experience suggested respondents could probably not attend to greater than 200 food names per questionnaire, deletions were made, using two criteria:

(1) similarity to other foods and (2) number of items in a food group having the same main ingredient(s). The list was reduced to 342 food names that categorized into 19 food groups. A majority of the food names were previously surveyed and retained to provide perspective on food preference trends. About one-third were new names that had never been surveyed.

After the deletion process, the number of food names was still too many for one questionnaire. Accordingly, two random lists of 192 names were generated. Included in each of the two lists were reliability check items: 34 appeared on both lists and 4 were repeated within each list as well as between lists. between questionnaires. More check food were compared between than within questionnaires, because the use of two food lists in this kind of survey had not been done before. At least one food from each of the 19 food groups was included, most of them representing high, moderate or low preference items from previous surveys. Each food group was represented with an equal number of items on each list. When surveys were administered, List 1 and List 2 questionnaires were alternately interleaved before passing out to equalize numbers of responses per item.

Figure 1 indicates the numbers of items surveyed from each of the 19 food groups. The list emphasized main meal items.

#### FOOD GROUP

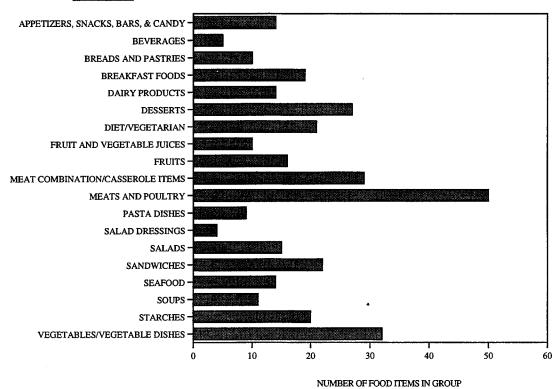


FIGURE 1. NUMBER OF ITEMS SURVEYED, 19 FOOD GROUPS

Nearly one-third were from the meats and poultry and meat combination/casserole groups. Less emphasis was placed on vegetable, starch and dessert groups. For the first time, items broadly classified as diet/vegetarian were surveyed. \_\_\_

Questionnaires were reproduced on Survey Network bubble paper forms by a local printing contractor. The questionnaire is reproduced in Appendix G.

#### Surveying Procedure.

Personnel from Natick's Operational Forces Interface Group (OFIG), Advanced Systems Concepts Directorate, recruited Army enlisted personnel to participate in the food preference surveys. Typically, troops were gathered in an auditorium or classroom, received an overall Natick briefing, outlining benefits to them of Natick's consumer feedback work. Then the questionnaires and number 2 pencils were passed out and the survey completed. Most respondents completed the questionnaire in 30-45 minutes. Because detailed instructions were included, the questionnaire was designed to be self-administered. However, whenever possible, a briefing with slides was presented beforehand to give respondents a brief background about food preference surveying and to emphasize key points in the instruction set.

Sites and troops were selected to meet the demographic sampling plan. Demographic composition of a soldier respondent sample was not known in advance of a survey mission. Accordingly, comparison of the respondent sample to the May 1993 Army enlisted personnel demographic composition (Greenstreet and Ferris, 1993) was made when about two-thirds of the targeted number of questionnaires had been collected. It was found that the respondent sample deviated from the May 1993 distribution primarily by oversampling lower age brackets, years service and rank than the Army enlisted population. Therefore, additional respondents sampled emphasized the middle to high age groups and the corresponding greater years service and NCO grades.

Personnel at ten Army bases were surveyed: Forts Benning, Bliss, Bragg, Campbell, Hood, Lee, Ord and Stewart, Scofield Barracks (HI) and Sickles Army Air Field, Germany.

All completed questionnaires were visually examined. Particular attention was paid to the preference and frequency responses. Questionnaires were discarded that (1) were marked improperly ("X", "\forall", etc. instead of the requested solid mark (①); (2) were more than 50% incomplete; (3) "straightlined," i.e., drawing a line through the same responses for all items on a page(s); (4) showed regular "patterns" of responses indicating lack of attention to food names and/or (5) filled out so carelessly that cleanup would be too time consuming. Accepted/validated questionnaires were then manually coded in the data entry fields reserved for the following information:

(1) respondent number, (2) respondent age, (3) ethnic background and (4) write-in responses for the cooking/ specialty food question (No.8). Validated questionnaires were then optically read on a National Computer Systems NCS<sup>TM</sup> OpScan 5° scanner. Scanner raw data printouts were checked for missing or out of range values and manually corrected from the original questionnaire. Finally, summary statistics - percentages, means and frequencies - were computed.

#### RESULTS AND DISCUSSION

Nearly 2,000 questionnaires were collected at 10 Army bases. Of these, about 10% were lost due to failure to meet the criteria described previously. In most of these cases, the food list part of the questionnaire was not completed because respondents did not understand how to fill in the frequency format. When oral pre-survey briefings were given that included an explanation of the frequency format, performance improved. Some respondents evidently lost patience with the frequency format partway through the food list, then completed the remainder of the list by "straightlining" which invalidated the questionnaire. Questionnaires with incomplete food lists were accepted for scanning if at least 50 percent of the food list was completed and responses seemed appropriate. In addition, questionnaires with selective responses to the food items or which only had responses to the preference question were also accepted, if the other guidelines were satisfied.

# Demographic Description of Survey Sample

Demographic distributions indicated the respondent sample did not match the Army enlisted population on certain characteristics including, but not limited to, rank and gender. The total respondent sample was overrepresented by the lower ranks and related characteristics of age and time in service; females were underrepresented. These differences were explainable in part by high proportions of E-1 trainees at Forts Lee and Benning (48 and 57%, respectively). Samples at all other sites were more closely representative of the Army population. In ethnic/racial composition, whites and hispanics were overrepresented, and blacks were underrepresented. Survey respondents had a higher education level than the Army population, They closely matched the Army population in geographic area of origin.

A rationale for oversampling lower enlisted grades is that they comprise an important segment of consumers using Army food service presently and in the near future. Nevertheless, it was deemed appropriate to bring the food preference and frequency mean responses into closer alignment with the Army's demographic composition for rank and gender. Therefore, the demographic profile as well as food preference and frequency means were weighted according to the formula and example given in Appendix A. In addition to the seven single characteristics described above, certain combinations of rank and gender were undersampled while other combinations were oversampled. To compensate for this, per the example in Appendix A, each soldier was assigned a weight. This weight was less than 1.00 for soldiers that fell into rank/gender combinations that were oversampled and was greater than 1.00 for soldiers that were in an undersampled combination. Computed weights ranged from a low of 0.16 for the

rank/gender combination of E-1/female, to a high of 7.97 for the combination of E-7/male. Weighting procedures of this kind are commonly used when samples drawn from a population with known parameters is not deemed representative of that population.

The demographic makeup of respondents is given in Appendix B. Of the 1,797 questionnaires collected, 1665 (92.7%) were from enlisted personnel. Since officers and warrant officers represented a small percentage of survey respondents, their demographic composition was not broken down further. However, their responses were counted in computing mean food preference and frequency ratings. Appendix B gives the May 1993 Army demographic profile with the obtained and weighted distributions for respondents. Note that, in general, the weighted distributions bring the respondent sample into closer alignment with the Army population.

# Responses to General Food Questions

Question 8 asked respondents to indicate three types of cooking or specialty foods they like best among 18 choices given. Table 2 gives the percent frequencies of mention ranked in descending order. Five top choices emerged: Italian, Mexican, Chinese, Fast Food and General American. Mentioned about half as frequently as General American were Southern and Soul. Comparable Army data were the earlier consumer surveys at Ft. Lewis, WA and Ft. Lee, VA. In the former survey, Keiss et al (1972) reported the most frequently mentioned choices when respondents were asked to indicate three ranked choices. The top five in descending order were: Italian, Seafood, Mexican-Spanish, Soul and Chinese. He did not include General American or Fast Food categories. Keiss found that Soul was either chosen as a top choice or not at all. In a subsequent survey (Branch et al, 1974), the approximate ranking was General American, Seafood, Italian, Southern and Soul. The Nordlie (1983) contractor survey omitted this question.

The current survey clearly indicated that the passage of over 20 years has solidified the popularity of Italian, Mexican and Chinese cooking while the popularity of General American has decreased somewhat. Not only were the rankings more clearcut, but the percent mentions were also higher than in the past Army surveys cited. Soul and Southern cuisines decreased the most in popularity since the previous surveys. Finally, although cuisines or cooking styles such as Thai and Vegetarian became increasingly popular among the United States civilian population during the late 80's - early 90's, these data suggest that they have yet to be widely accepted by soldier consumers.

TABLE 2. Question 8: Percent Mentions, Top Three Choices of Cooking Type or Specialty Food 1

	-12F	
Food Type	Number	Percent
Italian	685	44.1
Mexican	631	40.6
Chinese	552	35.5
Fast Food	528	34.0
General American Style	462	29.7
Southern Style	247	15.9
Soul	232	14.9
Cajun/Creole	190	12.2
German	142	9.1
Japanese	65	4.2
French	57	3.7
Greek	47	3.0
Vegetarian	34	2.2
Indian	29 .	1.9
Thai	26	1.7
Eastern European	16	1.0
Middle Eastern	15	1.0
Kosher	9	0.6

Data from 1797 questionnaires.

Question 9 asked respondents to indicate, based on their experience with military rations, whether they would prefer military menus to have 27 food groups less often, as often as now or more often. Five scale choices were given, scored from much less often = 1, as often as now = 3 to much more often = 5. Mean frequencies are given in Table 3, ranked from "more" to "less often." The means indicated that respondents wanted the majority of food groups more often. Obviously, it is unrealistic to think that the majority of groups are underserved on military menus.

TABLE 3. Desired Serving Frequencies<sup>1</sup>

TABLE 3. Desired Belvin	,,	
FOOD GROUP	Mean ±	Std.Dev.
Fresh Fruits	4.2	0.9
Pasta	4.2	0.9
Seafood	3.9	1.2
Sandwiches	3.8	1.0
Meats w/ Gravies/Sauces	3.8	1.1
High Fiber Foods	3.8	1.0
Desserts	3.7	1.0
Ethnic Foods	3.6	1.1
Low Fat Foods	3.6	1.1
Poultry	3.6	1.1
Soups	3.6	1.0
Cooked Vegetables	3.5	1.0
Whole Grain Cereals	3.5	1.0
Red Meats	3.5	1.2
Dairy Prod., Regular Fat	3.4	1.0
Low Salt Foods	3.4	1.1
Sugar Sweetened Beverages	3.4	1.1
Low/No Fat Dairy Products	3.3	1.1
Reduced Calorie Foods	3.3	1.1
Natural/Organic Foods	3.3	1.1
Raw Vegetables	3.3	1.2
Reduced Sugar Foods	3.2	1.1
Fried Foods	3.1	1.2
Casseroles	3.0	1.1
Diet Beverages	2.9	1.2
Vegetarian Dishes	2.7	1.2
Salty Foods	2.6	1.1

Scale: 1=Much Less Often; 2=Somewhat Less Often; 3=As Often As Now; 4=Somewhat More Often; 5=Much More Often. Data from 1797 questionnaires.

Statistical analysis of Table 3 data indicated no significant differences between the highest and lowest frequencies. The standard deviations of one scalepoint indicated a considerable overlap in mean values. In addition, there was no clear demarcation between food groups wanted "more" or "less" often. Possibly, respondents were considering individual items in a group they wanted served more frequently rather than the group in general. Food groups considered "good for you," i.e., reduced sugar foods, raw vegetables, organic foods, reduced calorie and low fat dairy products, were wanted marginally more often than presently. Wanted "somewhat more often" were fresh fruits, pasta and high fiber foods. The seafood group, a top choice on the 1972 Army survey cooking/specialty food list, was also wanted somewhat more frequently. Food groups wanted as often as now or less frequently were casseroles, diet beverages, vegetarian dishes and salty foods. In view of these data, it is advisable to base menu and product development decisions on individual food item data.

#### Reliability Check Foods

Appendix C-1 gives the 38 food names duplicated on both List 1 and List 2 questionnaires. They are ranked by differences between preference mean values, computed by subtracting List 2 from List 1 means for each duplicate. A reliability coefficient, Cronbach's Alpha ( $\alpha$ =0.985), indicated high between questionnaire reliability. When a multiple regression analysis was computed between the two questionnaires, an R2 of 0.968 was obtained, indicating high rating scale reliability. However, as indicated in Figure 2, the computed regression line (dotted) resulted in a intercept value (0.709) significantly different than zero (P(0.001) and a slope (0.878) significantly different than 1 (P(0.001)). When means for repeated foods having the greatest between questionnaire differences were removed (dark rye bread and stewed prunes), the intercept value (0.428) and the intercept (0.923), although closer to 0 and 1, respectively remained significantly different. Since questionnaires were handed out alternately to respondents at each survey site, this cannot be an effect among sites. Within List 1 and List 2 questionnaires, however, the context within which the duplicate foods were rated, was different. For example, some List 2 foods may have been randomly grouped among higher preference foods than on List 1. Future data analysis, outside the scope of this report, is needed to determine whether this effect was operant. Very likely, the practical effects of the significant differences are small.

Appendix C-3 indicates high within-questionnaire reliability for preference ratings. Only four check foods were included within each questionnaire because past data indicated excellent within-questionnaire reliability. Because of the small number of pairs, correlations were not computed.

### 38 FOOD NAMES APPEARING ON LIST 1 AND LIST 2

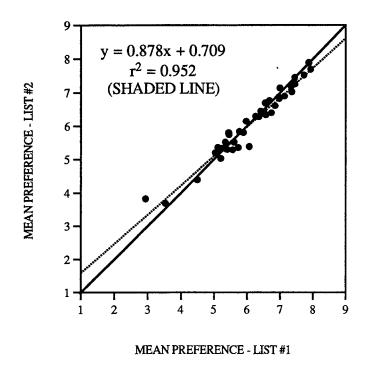


FIGURE 2. REGRESSION EQUATION AND LINE FOR PREFERENCE DATA

List 1 vs List 2 mean frequency ratings for 38 food pairs are given in Appendix C-2. Figure 3 gives the regression line for List 2 plotted against List 1 means. Differences between means of duplicated foods ranged from -3.52 to +1.18 days. List 2 respondents tended to indicate higher frequencies than List 1 respondents. In Figure 3, the slope of the computed regression line (0.857) was significantly different (P (0.001) than 1.0 and the intercept (2.542) significantly different than 0. The differences between the expected and actual slope and and intercept was due in part to List 2 means being greater than List 1 for 28 of the 38 food pairs; in addition, larger differences were seen when List 2 means were greater than when List 1 means were greater. These findings add support to the previous postulation regarding context effects.

In Appendix C-4, as with the preference ratings, respondents generally indicated higher frequencies for a food name the second time it occurred on the same questionnaire. However, differences between the first and second time the foods were listed were within the standard deviations of the means.

## Highest and Lowest Ranked Preference, Frequency and Highest Never Tried Lists

Following the convention initiated by Meiselman et al (1972), the 25 highest and lowest preference and frequency food names are listed in Tables 4 and 5. The 25 most never tried foods are given in Table 6. Figures 4 and 5 show the percentages of items from the 19 food groups that were highest and lowest in preference and frequency in Tables 4 and 5, respectively.

Most Preferred Food Names (Table 4). The following shifts in preferences since the 1972 and 1983 surveys were noted:

- 1. Milk (whole milk) was notably absent from the list, whereas it had been the highest preference item in both previous surveys.
- 2. Preference ratings for items associated with Italian cuisine pizza, lasagna and spaghetti were the highest of all entree foods. All were among the top 25 in 1983 but not in 1972. A related high preference item not previously surveyed, garlic bread, also emerged.
- 3. Fried chicken, also on the present survey, was replaced by grilled chicken breast, an item not previously surveyed. Grilled steak and barbecued ribs retained their popularity as in the past surveys.
- 4. The most highly preferred beverages were orange juice, milkshake, bottled spring water and hot chocolate. Both

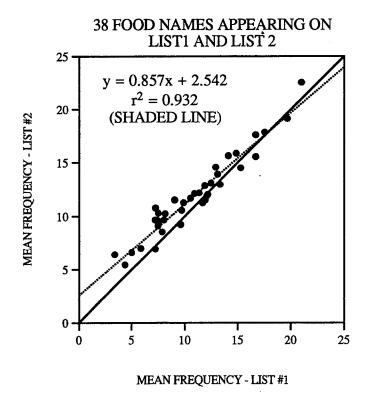


FIGURE 3. REGRESSION LINE AND EQUATION FOR FREQUENCY DATA

TABLE 4. FOOD NAMES MOST AND LEAST PREFERRED

25 MOST PREFERRED 25 LEAST PREFERRED

	rnu unnu	PREFERENCE		I FILL LUILD	PREFERENCE
LIST	ΠEM	RATING	LIST	ITEM	PATING
2	Pizza	7.92	2	Liverwurst Sandwich	4.94
1&2	Orange Juice	7.88	1	Asparagus	4.88
1&2	Lasagna	7.72	1	Spinach	4.77
1 .	Grapes	7.71	1	Tofu Rice Burgers	4.72
1	Spaghetti w/Meat Sauce	7.71	1	Spinach Salad	4.64
1	Garlic Bread	7.58	1	Pigs Feet	4.64
2	Hamburger (100% Ground Beef)	7.55	2	Cloud Ears	4.63
2	Grilled Steak	7.53	1	Brussels Sprouts	4.61
1	Bottled Spring Water	7.52	2	Zucchini Squash	4.58
2	Milk Shake	7.51	2	Plain Yogurt	4.45
2	Ice Cream	7.50	1&2	Harvard Beets	4.44
1	Barbecued Spareribs	7.49	1	Stewed Tomatoes	4.42
1	Hot Chocolate	7.47	1	Lima Beans	4.41
1	Chocolate Chip Cookies	7.47	2	Diet Cola	4.40
1	Apples	7.46	1	Peanut Soup	4.38
1	Oranges	7.46	1	Tomato Juice	4.38
2	Chef's Salad w/Meat & Cheese	7.45	1	Mincemeat Pie	4.27
2	Breaded/Fried Shrimp	7.44	2	Chicken Ala King	4.27
1	Grilled Chicken Breast	7.44	1	Comed Beef Hash	4.26
2	Bananas	7.43	1	Green Pea Soup	4.19
1	Strawberry Shortcake	7.40	2	Braised Liver w/Onions	4.10
1	Cinnamon Sweet Rolls	7.39	1	Dried Dates	3.98
2	Soft Serve Ice Cream	7.37	2	Decaffeinated Coffee	3.92
1	Apple Pie	7.36	1&2	Buttermilk	3.61
1	French Fried Potatoes	7.34	1&2	Stewed Prunes	2.94

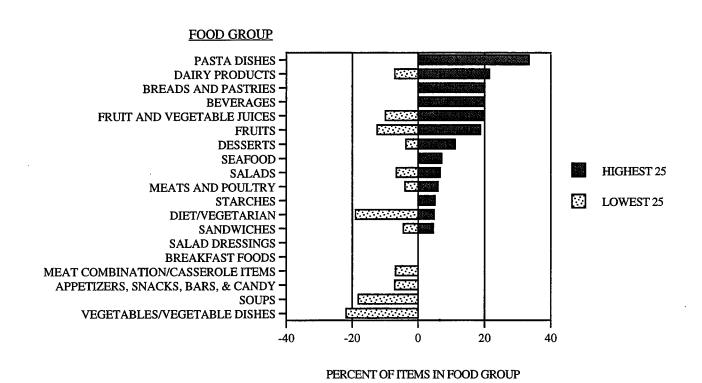


FIGURE 4. PREFERENCE RATINGS, HIGHEST/LOWEST 25 FOODS

orange juice and milkshake continued to be high preference items. The high preference for spring water (not previously surveyed) is likely related to the national trend of consuming bottled waters and the perceived problems with public water supplies. Hot chocolate replaced chocolate milk which was on this list in the previous surveys.

- 5. Of the fruits, grapes were the highest preference item and on the list for the first time. Apples, oranges and bananas retained their positions as the other high preference fruits. Peaches (on the present survey) were not on this list as they were previously.
- 6. Chef's salad with meat and cheese replaced tossed salad (also on the present survey) which was the highest preference salad on the 1983 survey.
- 7. One seafood item, fried shrimp, appeared on the list for the first time.
- 8. French fried potatoes was the only starch the current list as it was on the two previous surveys.
- 9. The only breakfast associated item on the list was cinnamon sweet rolls, previously surveyed as "sweet rolls." All egg items on previous lists fried eggs, eggs to order and omelet failed to make the current list.
- 10. Of the dessert items, ice cream and strawberry shortcake retained their positions as high preference items. Apple pie, chocolate chip cookies and soft serve ice cream were listed for the first time.

Least Preferred Food Names. Of the 25 least preferred Foods listed in Table 4, 11 and 13 of the items, respectively, were not surveyed in 1972 or 1983. Although mean ratings of these items were the lowest of the food names surveyed, standard deviations were also high, indicating not only a scatter in individual attitudes but also the existence of consumer segments who like the items. The following trends were noted:

- 1. Eight of the low preference items were vegetables or vegetable salads compared to 9 and 11, respectively, in the 1983 and 1972. Of the eight, zucchini squash, harvard beets, lima bans and stewed tomatoes were repeats from 1983 and the former two from 1972. New entries were asparagus, spinach, spinach salad and brussels sprouts, all of which were classified as "low preference" in the previous surveys.
- 2. Of the meat or meat combination items, liverwurst sandwich and pigs feet (not surveyed previously), liver and onions, corned beef hash and chicken ala king were listed.

onions, corned beef hash and chicken ala king were listed. Ratings for variety meat (liver) products were consistent with past surveys.

- 3. The two soups, green pea and peanut, in addition to being lowest preference, also had high "never tried" percentages.
- 4. A diverse group of beverages, diet cola, tomato juice, decaffeinated coffee and buttermilk were listed. The first item also was on the 1983 list.
- 5. Stewed prunes was the lowest preference item found in the survey. Another newly surveyed dried fruit, dates, yielded a comparable result.
- 6. The items tofu rice burgers and cloud ears (a puffed snack food) were not only low preference but also unfamiliar to the majority of respondents.
- 7. Mincemeat pie continued to be the lowest preference dessert item, suggesting it not even be served at holiday meals.

Most and Least Frequently Wanted Foods. These lists are given in Table 5. The graph, indicating percentages from each food group on the two lists, are given in Figure 5. Similar to the findings of Meiselman et al (1972), only 11 items most frequently wanted were also on the high preference list. Food names that overlapped were all from the beverage, fruit or dessert food groups. All 25 highest frequency foods were ones that typically would always be available in various food service sttings. Nearly half (11) were beverages; the other 14 were items from fresh fruit, salads, accessory (bread and butter), breakfast and dessert groups. No main meal items (entrees) were on the list. Mean frequencies, in times per month, ranged from a high of 22 to a low of 16. These ranked frequencies were comparable to those obtained in the Nordlie (1983) survey in which respondents were asked to write in the desired times per month. The current list cannot be directly compared to those found by Meiselman (1972) since the latter were obtained using a different frequency format that did not include al possible days per month; furthermore, monthly frequencies were sums of the frequencies expressed for an item at three daily mealtimes. Finally, 17 and 14 foods from the 1983 and 1972 surveys, respectively, remained on the current list.

Of those foods least frequently desired, 12 were also lowest preference: spinach, spinach salad, stewed tomatoes, lima beans, mincemeat pie, chicken ala king, corned beef hash, green pea soup, liver w/ onions, dates, buttermilk and stewed prunes. Note that food groups represented on the lowest preference-lowest frequency lists were different than those represented on the high

TABLE 5. FOOD NAMES MOST AND LEAST FREQUENTLY WANTED

25 MOST FREQUENT 25 LEAST FREQUENT

25 MOST PREQUENT 25 LEAST PREQUENT					
		FREQUENCY			FREQUENCY
LIST	ПЕМ	RATING	LIST	ITEM	RATING
1&2	Orange Juice	21.79	1	Cauliflower au Gratin	6.71
1	Bottled Spring Water	20.39	1	Tomato Soup	6.70
1	Cola Beverage	19.84	1	Spinach	6.64
2	Iced Tea	19.65	1	Sardines	6.57
1&2	Brewed Coffee	19.40	2	Chicken Ala King	6.55
2	Bananas	18.97	1&2	Fettuccini Alfredo	6.48
1	Oranges	18.12	1	Corned Beef	6.44
1	Cold Cereals (Assorted)	18.08	1	Stewed Tomatoes	6.38
1	Whole Wheat Bread	17.75	1	Lyonnaise Carrots	6.19
1&2	Tossed Green Salad	17.71	1	Lima Beans	6.14
2	Chef's Salad w/Meat & Cheese	17.66	1	Cooked Cabbage	6.03
1	Hot Chocolate	17.64	1	Ratatouille	5.85
1	Grapes	17.53	1&2	Tuna Noodle Casserole	5.84
1	Apple Juice	17.24	1	Spinach Salad	5.64
1&2	Apples	17.16	1	Quiche Lorraine	5.48
2	Eggs to Order	17.14	1	Chop Suey	5.45
2	Milk Shake	17.04	2	Buttermilk	5.45
2	White Bread	17.01	1&2	Stewed Prunes	5.04
1	Whole Milk (3.2% Fat)	16.71	1	Green Pea Soup	5.03
2	Butter	16.69	1	Comed Beef Hash	4.58
2	Chocolate Milk	16.60	1	Beef & Com Pie	4.58
2	Soft Serve Ice Cream	16.56	1	Buttermilk	4.39
2	Peaches	16.39	1	Mincemeat Pie	4.36
1	Lemonade	16.37	2	Braised Liver w/Onions	4.07
2	Ice Cream	16.35	1	Dried Dates	3.57

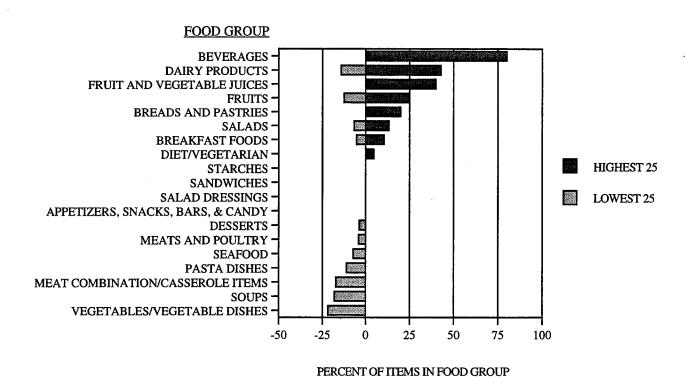


FIGURE 5. FREQUENCY RATINGS, HIGHEST/LOWEST 25 FOODS

preference-high frequency lists. As indicated by the foods mentioned, the former list included entree/combination foods, dried fruits, vegetables, a soup, a dessert and a dairy item. Figure 3 highlights the percentages of foods from each group on the high and low frequency lists.

Very few of the food names from the least frequent list were repeated from the past surveys. This was due primarily to the dropping of food names on the past surveys and adding names never surveyed. Mean frequencies of those items resurveyed were comparable to those found by Nordlie (1983).

Most Never Tried Foods. These items are listed in Table 6. Although the survey was not intended to test respondents' food knowledge, it was desirable to determine the extent of their familiarity with foods and cuisines that have become more prevalent in the U.S. since the 1972 and 1983 surveys. The items in this table indicate (1) items from cuisines that are little known to respondents, e.g., paella (Spanish) and spaetzle (German); (2) a general lack of familiarity with vegetarian items, e.g., tofu rice burgers and lentil loaf; (3) unfamiliarity with items within popular cuisines, e.g., spinach lasagna and eggplant parmesan (Italian); (4) unfamiliarity with items having Armed Forces Recipe Service names, e.g., African chili, lyonnaise carrots and yakisoba. Regarding recipe names, it appears they convey little information to consumers about what the item is/the preparation method. Conversely, if they saw these items on a food service line, they would probably not recognize them by their recipe name.

# Use of Appendix Tables D, E and F

For the convenience of menu and ration planners/developers, the ratings for each of the 19 food groups surveyed are ranked in Appendix D from highest to lowest preference under each group name. The reader may feel some foods are "misclassified." For example, bottled spring water is classified with an assortment of items having positive diet and health connotations. In this and the other Appendices, the 38 between- and 4 within-list reliability check food names are included as ranked for a total of 384 items. In Appendix D, the percent never tried and frequency means are also given with the preference means. Finally, ranked frequencies are given in Appendix F, if a food is selected on the basis of relative frequency.

TABLE 6. THE 25 MOST NEVER TRIED FOODS

LICT	17 27 27 27 27 27 27 27 27 27 27 27 27 27	PERCENT
LIST	ПЕМ	NEVER TRIED
1	Paella	78.46
1&2	Spirulina Miama	77.17
1	Peanut Soup	76.48
2	Cloud Ears	75.48
1	Ratatouille	73.96
2	Quark	73.29
2	Moussaka	72.84
2	Tapas	70.82
1	Tandoori Chicken	70.36
1	Tofu Rice Burgers	69.86
1	Quiche Lorraine	68.14
1	Lyonnaise Carrots	67.22
1	African Chili	67.10
2	Vegetarian Hot Dog	65.71
2	Tomato Calamari	65.23
1	Spaetzle	64.96
1	Frijole Salad	63.87
2	Lentil Loaf	63.22
2	Carrots Amandine	62.77
2	Carob Coated Snack Bar	61.98
1	Feta Cheese	61.81
2	Yakisoba	61.57
2	Vegetarian Chili	60.40
1	Eggplant Parmesan	59.91
1	Spinach Lasagna	59.67

# Preferences by Food Group (Appendix D)

Classification of Preference Levels by Mean Value. The 384 preference means ranged from a high of 7.93 to a low of 2.94. For purposes of discussion, preference ratings can be classified into four categories as follows:

(1) Disliked, 5.0 or less (8,6% of items);

(2) Low preference, >5.0 to <6.0 (26,8% of items;

(3) Moderate preference, >6.0 to <7.0 (43.8% of items;

(4) High preference, >7.0 (20.8% of items

Appetizers, Snacks, Bars and Candy. The highest preference foods in this category are those cooked and served as appetizers: mozzarella sticks, nachos and potato skins. This is consistent with their popularity in restaurant industry censuses. They would be appear to be candidates for short order menus. Moderately high preference items, such as chewy granola bar, beef stick, tortilla chips and related items have already been adopted or are being evaluated for inclusion in field ration menus. The last three items listed (snack foods) are low preference or disliked as well as unfamiliar.

Beverages. Comment has already been made about hot chocolate and cola beverage which are on the high preference list. Iced tea closely missed being on that list and is also high preference. Bottled spring water and whole milk, classified under the diet/vegetarian and dairy food groups, respectively, are listed here for convenient comparison. The former is the highest preference item in the beverage group, while the latter, in previous surveys the highest preference item of all foods, dropped substantially. Preference for brewed coffee is unchanged from past surveys; although of moderate preference, its appearance on the most frequently desired list suggests that Army consumers expect it to be available almost always. Instant coffee remained a very low preference item, as found previously.

Breads and Pastries. Two items, garlic bread and cinnamon rolls, were on the 25 highest preference list. A notable shift in preferences is that whole wheat is now somewhat higher in preference than white bread. Both items were also on the 25 highest frequency list. Dark rye bread was lowest preference of the group.

Breakfast Foods. No item in this category was on the 25 highest preference list but two items, cold cereals and eggs to order were on the 25 high frequency list. Eggs to order have dropped in preference since previous surveys, but other egg items such as french toast, omelet and deviled eggs (not necessarily a breakfast item) were higher in this survey than previously. Preferences for breakfast meats such as bacon and sausage have decreased. Newly surveyed items such as breakfast pizza and instant breakfast drink were low preference items; with the

former, either respondents did not understand what the item was or they considered traditional pizza an item they did not prefer for breakfast. Cooked cereals were the lowest preference items in this group, but the high standard deviations indicate the existence of respondent segments who strongly like and dislike these items.

<u>Dairy products</u>. The highest preference items on this list are desserts, snacks or short order foods. Both frozen and unfrozen yogurt continued to rate substantially lower than ice creams, despite substantial gains in popularity with U.S. consumers since the previous two surveys. Interestingly, there was no difference in preferences between butter and margarine. Feta cheese, never before surveyed, was unfamiliar to nearly two-thirds of the respondents and low in preference as well. Cottage cheese continued to be low preference, and buttermilk was clearly disliked.

Desserts. As noted previously, chocolate chip cookies became the highest preference dessert and are on the highest preference list along with two other staples of that list, strawberry shortcake and apple pie. Strudel, strawberry chiffon pie, Boston cream pie and apple coffee cake were "never tried" by 33 or greater percent of the respondents but also rated moderate in preference by those familiar with them. This suggests that these items could be served on a trial basis, if not already, and are likely to be accepted by customers. Among the low preference items were those with ginger spice, one cookie (coconut raisin) and most puddings. Finally, mincemeat pie was not only disliked but over half of the respondents were unfamiliar with it.

Diet/Vegetarian. In this category, other than bottled spring water, only five of 22 items averaged a moderate preference rating. Of the five, nearly two-thirds of the respondents were unfamiliar with a carob coated snack bar. The majority (14 out of 22) of the items in this group were low preference. Many were also unfamiliar to one-third or more of the respondents as indicated by the percent never tried statistic. Thus, it appeared that either substituting them for other related menu staples (e.g., spinach lasagna, vegetarian chili or tofu rice burgers for their counterparts containing meat) or introduction/inclusion of other diet and health related foods in the menu (e.g., skim milk, cholesterol-free eggs, plain yogurt) would be unsuccessful.

Fruit and Vegetable Juices. As noted, orange juice is the highest preference beverage, considerably higher than the instant version of the item. Pineapple juice increased in preference over past surveys to a moderate level. Cranberry juice, although more widely adopted in the U.S. since the previous surveys, increased only marginally in preference. Tomato juice dropped substantially in preference and is now disliked. Vegetable juice is not likely a satisfactory substitute since it is also low preference.

Fruits. The majority of fruits were surveyed without reference to whether they were fresh or processed (canned, frozen, dried). Four items increased substantially in preference since the previous surveys: grapes, pineapple, cherries and fruit cocktail. Increases in preferences for fruits suggest that consumer education and promotion of their consumption have impacted Army personnel as well as the civilian population. Dried fruits (apricots, dates, prunes) continue to be low preference or outright disliked, in addition to 40 percent or more of the respondents who indicate they have never tried them. Stewed prunes was the lowest preference item in the survey.

Meat Combination/Casserole Items. Seven of the first nine ranked items were Mexican. Fajitas, burritos and tacos were the top three ranked. Although high in preference, fajitas were also unfamiliar to one-fourth of the respondents. Preferences for this group of items supported the finding that Mexican style cooking was one of the three top choices (Question 8). Other than items associated with Mexican cuisine, no others in this group were high preference. In this group were items with recipe names appearing regularly on Army menus. Most were moderate to low preference and were accompanied by high percentages of respondents unfamiliar with them. Examples were: New England boiled dinner, African chili, el rancho stew, American chop suey, ham-pasta-tomato casserole, yakisoba and beef & corn pie. From forty percent to two-thirds of the respondents indicated they had never tried these items. The lowest preference or disliked items were tuna noodle casserole, chicken ala king and corned beef hash.

Meats and Poultry. Twelve of the 50 items were high preference, including three - grilled steak, barbecued spareribs and grilled chicken breast - listed among the 25 highest preference foods. Chicken items were equivalent in preference to beef items. Although few pork, ham and lamb items were surveyed, they received comparable preference ratings to beef and chicken. Three high preference items were unfamiliar to one-third or more of the respondents: jaegerschnitzel, mesquite grilled meats and steak ranchero. A similar proportion of respondents also indicated unfamiliarity with other items in the "high moderate" preference category: shish kabob, chinese five spice chicken, Hawaiian chicken. chicken oriental, bratwurst and tandoori chicken. Unfamiliarity in part may be explainable by the recipe names of the items. Cream and chipped beef items remained low preference as in the previous surveys. Disliked to some degree were chitterlings, pigs feet and liver w/onions. As with other food groups, the high standard deviations suggested the existence of smaller respondent segments who more intensely like or dislike these items than indicated by the means.

Pasta Dishes. Three of the nine items in this group were on the highest 25 preference list as well as the highest percent of items of all food groups on that list (Figure 3). Since most are related to the Italian cooking style, this adds support the Italian as one of the top three cooking styles (Question 8). Because of its association with that style, pizza is included here, although it could be classified elsewhere. All but one of the nine items, chili macaroni, were moderate to high preference. Although moderate in preference, about 50 percent of the respondents were not familiar with fettucini alfredo or stuffed shells.

Salad Dressings. Four items, representing oil, tomato or dairy bases, were surveyed, a fewer number than in the past. Of these, the Italian and ranch types were rated moderate in preference. In addition to being low in preference, Russian and blue cheese types were unfamiliar to a one-third or more of the respondents.

Salads. Chefs salad with meat and cheese replaced tossed green salad from the past two surveys as the highest preference item in this group although both can be considered high preference. A new high preference item is taco salad. Moderately high in preference were pasta and jellied fruit salads. Since pasta salad is a more of a generic name, if it was presented as macaroni salad, it might prove to be poorly accepted, as indicated by past surveys. Guacamole salad, a new entry, was on the high end of the "low preference" bracket, and nearly half the respondents were unfamiliar with it. Cole slaw was in the same bracket but was generally familiar to respondents. Most of the other salad items were liked to some degree, but it should be noted that one-fourth to two thirds of the respondents were unfamiliar with them. A new item surveyed, spinach salad, was not only disliked on average but was also unfamiliar to nearly onehalf the respondents.

<u>Sandwiches</u>. The survey revealed an array of moderate to high preference sandwich items containing ground beef, turkey, ham, cheese, seafood, coldcuts, chicken and related ingredients. New items on the survey such as gyros, calzone, seafood salad, cheese steak and turkey ham rated in the high moderate to high preference range but it should be noted that, for the first three mentioned, one-third or more of the respondents indicated they had never tried them. Although the 100% ground beef patty was among the top 25 preferred items, it is important to note that the *known* presence of soy protein in ground beef had a negative impact on preference for the hamburger. Finally, the liverwurst sandwich was the lowest preference item as well as unfamiliar to respondents.

Seafood. For these items, preparation methods were emphasized instead of determining preferences for specific species. With fish items, preferences were equivalent for frying, baking or broiling, all in the moderate range. Overall, respondents indicated higher preferences for the entire group than in past surveys. The preference for breaded/fried shrimp, in particular, was the highest of the group as contrasted with previous surveys in which low preferences were indicated. Newly survey items such as shrimp jambalaya, cajun blackened fish, herb baked fish and tempura battered fish were moderately high in preference, but more than 40 percent of the respondents indicated they were unfamiliar with them. Although liked slightly, paella was the most unfamiliar of any items in this group. The last three ranked items of the group - fried clams, calamari and sardines - were both low preference and unfamiliar to one-fourth or greater of the respondents.

Soups. Fewer soup names were included in this survey than previously. As in previous surveys, chicken noodle was the highest preference and most familiar soup in the group. Minestrone, cream of mushroom and French onion soups were relatively low in preference but higher rated than in previous surveys in which they were disliked; however, about a third of the respondents were unfamiliar with them. The moderate preferences expressed for the generically named soup-salad and soup-sandwich combos suggested that various versions of these would be viable options for short order service; in addition, they were concepts that were familiar to Army consumers. Very low preference or disliked soups were tomato, peanut and green pea. Peanut soup was a newly added item and was clearly unfamiliar to respondents.

Starches. A variety of potato, rice, stuffing and bean items representing various preparation methods were liked to various degrees. As in past surveys, french fried potatoes were high preference, and the spiral cut style was equivalent. Of the six high preferences, five were potato items. Preferences for various rice preparations - plain (steamed), pilaf, Spanish and fried were in the moderate range and higher than noted for those items surveyed previously. Brown rice and the red bean-rice combination, new to the food list, were equivalent in preference to the other versions and were familiar foods to the majority of respondents. In this group also, in cases where descriptions such as "parsley seasoned," "savory," "pilaf," "dirty" and "rissole" were attached to potato and rice item names, 30 or more percent of the respondents indicated they had never tried the items. Potatoes au gratin, a newly listed item, was the lowest preference although familiar to most respondents.

Vegetables/Vegetable Dishes. The vegetable group, as in past surveys, contained the highest proportion of disliked items of all the groups and the highest percent of items on the 25 lowest preference list as indicated in Figure 3. The highest preference item was whole kernel corn with a rating equivalent to corn-on-the-cob in previous surveys. Major shifts noted from previous surveys were substantial increases in preferences for broccoli and green beans. Items associated with Soul food - turnip greens, collard greens, black eyed peas and okra - were "mid-low" to "mid moderate" in preference and were unfamiliar to about one-fourth of the respondents. Items prepared from eggplant, even though one was Italian associated, were very low preference, in addition to being unfamiliar to half the respondents. Most other items were disliked to some degree, some also having high percentages of never tried responses, suggesting they not be served.

### CONCLUSIONS AND RECOMMENDATIONS

An important question this survey was intended to answer is to what extent the food trends noted in the U.S. population are reflected in the expressed preferences of Army consumers. As discussed previously under the 19 food groups, U.S. food trends have evidently had a mixed effect on survey respondents. In some instances, items never surveyed but popular on U.S. restaurant menus emerged both as familiar and high preference foods. On the other hand, a number of the never surveyed items emerged as liked to some degree, but significant percentages of the respondents were unfamiliar with them. Thus, at this time, it appeared that some national trends have not yet been fully adopted by Army consumers.

Low Preference, Disliked and Unfamiliar Foods. Like the findings of Meiselman et al (1972), a review of current Army Master menus revealed that unfamiliar, low preference or disliked foods in this survey are presently being offered as main meal items. As noted when discussing survey results, the lower preference ratings were usually accompanied by higher standard deviations. This indicated the likely existence of consumer segments who like these items. However, many of these were also unfamiliar to more than one third the respondents. Thus, these segments would likely be smaller than needed to justify serving the item or including it in a field ration.

In discussing the results, the emphasis was on preference and in particular identifying high preference items in the various food groups. Desired serving frequency, in this survey as well as Meiselman's, remains the other critical issue in menu planning. This survey confirmed his findings that these two responses are largely independent, particularly as evidenced in the lists of most and least preferred and most and least frequently wanted foods. His caveats regarding frequency remain valid: (1) particularly in the case of main meal items - meats, combination dishes, starches and vegetables - high preferences do not necessarily mean that serving frequency of these items should be increased. Overserving of these items should be avoided. To assess this, present frequencies on Army Master Menus should be compared with desired frequencies from the current survey and any necessary adjustments made. (2) Low preference foods may actually be underserved compared to survey frequency; thus, their actual serving frequency should also be assessed. Overall, the interested menu planner/ration developer will find that respondents have overestimated all frequencies, even if considerably less than the 342 food items surveyed are selected for menus. The exceptions are the high frequency items that would normally appear at each mealtime. Thus, for most foods, the frequencies should be considered as relative, rather than absolute, guides to actual serving frequency,

Deletion of items should be considered when the combination of low preference, low frequency and high unfamiliarity exist. In cases where average preference is relatively high but the item is also relatively unfamiliar, efforts could be made to promote and "sell" these items to Army consumers due to their potential to be liked. Some of these items could replace those deleted.

Menu planners, particularly at the installation level, should continue to be aware of the demographic makeup of personnel at their site, e.g., concentrations of personnel of ethnic or regional origins that may like foods that the general Army population rates low or even dislikes.

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**APPENDICES** 

Appendix A. Example of Weighting Computation Used to Compute Weighted Demographic Statistics and Food Preference and Frequency Means

RANK/GENDER	COUNT	%	
E-1/MALE	24092	5.027	<- ARMY PROFILE
E-2/MALE	25048	5.227	
E-3/MALE	55431	11.567	
E-4/MALE	113251	23.633	
E-5/MALE	81939	17.099	
E-6/MALE	63292	13.207	
E-7/MALE	41747	8.712	
E-8/MALE	10929	2.281	
E-9/MALE	3191	0.666	87.418
E-1/FEMALE	3905	0.815	
E-2/FEMALE	4511	0.941	
E-3/FEMALE	9324	1.946	
E-4/FEMALE	18631	3.888	
E-5/FEMALE	11514	2.403	•
E-6/FEMALE	7370	1.538	
E-7/FEMALE	4301	0.898	
E-8/FEMALE	688	0.144	
E-9/FEMALE	49	0.010	12.582
	479213	100.000	
RANK/GENDER	COUNT	%	
E-1/MALE	429	26.047	<- SAMPLE PROFILE
E-1/MALE E-2/MALE	429 141	26.047 8.561	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE	429 141 180	26.047 8.561 10.929	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE E-4/MALE	429 141 180 298	26.047 8.561 10.929 18.094	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE	429 141 180 298 177	26.047 8.561 10.929 18.094 10.747	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE	429 141 180 298 177 105	26.047 8.561 10.929 18.094 10.747 6.375	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE	429 141 180 298 177 105 18	26.047 8.561 10.929 18.094 10.747 6.375 1.093	<- SAMPLE PROFILE
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE	429 141 180 298 177 105 18	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE E-8/MALE	429 141 180 298 177 105 18 122 30	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821	<- SAMPLE PROFILE 91.075
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-7/MALE E-8/MALE E-9/MALE	429 141 180 298 177 105 18 122 30	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE E-8/MALE E-9/MALE E-1/FEMALE E-2/FEMALE	429 141 180 298 177 105 18 122 30 85	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-7/MALE E-8/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-3/FEMALE	429 141 180 298 177 105 18 122 30 85 10	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-7/MALE E-8/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-3/FEMALE E-4/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE E-9/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-3/FEMALE E-4/FEMALE E-5/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11 2	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121 1.336	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-6/MALE E-7/MALE E-8/MALE E-9/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-3/FEMALE E-4/FEMALE E-5/FEMALE E-6/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11 2 22	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121 1.336 0.546	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE E-9/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-4/FEMALE E-4/FEMALE E-5/FEMALE E-5/FEMALE E-7/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11 2 22 9	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121 1.336 0.546 0.061	
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-6/MALE E-7/MALE E-8/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-3/FEMALE E-4/FEMALE E-5/FEMALE E-5/FEMALE E-6/FEMALE E-7/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11 2 22 9	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121 1.336 0.546 0.061 0.425	91.075
E-1/MALE E-2/MALE E-3/MALE E-4/MALE E-5/MALE E-6/MALE E-7/MALE E-8/MALE E-9/MALE E-9/MALE E-1/FEMALE E-2/FEMALE E-4/FEMALE E-4/FEMALE E-5/FEMALE E-5/FEMALE E-7/FEMALE	429 141 180 298 177 105 18 122 30 85 10 11 2 22 9	26.047 8.561 10.929 18.094 10.747 6.375 1.093 7.407 1.821 5.161 0.607 0.668 0.121 1.336 0.546 0.061	

Rank/Gender Combination, Food Preference Survey: Example of Computation from Table Data

### Formula:

ARMY SAMPLE

Army Ratio = Sample Ration X Weight (WT)

If Rank = E-1 and Gender = Male:

WT = 0.193

Appendix B. Demographic Description of Survey Respondents; Comparison With May 1993 Army Enlisted Personnel and Weighted Percentages All Respondents, Valid Questionnaires

Туре	Number	Percent
Enlisted	1665	92.7
Officers	29	1.6
Warrant Officers	60	3.3
Data Missing	34	2.4
Totals	1797	100.0

### Enlisted Personnel (N=1665)

Question 1, Rank/Paygrade

		st	JRVEY, %
RANK	ARMY, %	Actual	Weighted
E-1	4.1	30.9	5.8
E-2	8.2	9.2	6.2
E-3	11.6	11.8	13.5
E-4	18.4	18.4	29.9
<b>E-</b> 5	20.4	12.1	17.1
E-6	15.3	7.0	15.6
E-7/8/9	12.4	10.6	11.2

Question 2, Gender

	_	SURV	ΈΥ, %
GENDER	ARMY, %	Actual	Weighted
Male	87.7	91.6	87.4
Female	12.3	8.4	12.6

### Appendix B (Continued)

Question 3, Age

		Sı	ırvey
Range	Army	Actual	Weighted
17-20	15.1	37.7	20.1
21-25	35.4	29.2	31.1
26-30	20.3	14.7	23.5
31-35	14.6	6.8	15.6
36 +	14.6	11.6	9.7

Question 4. Time in Army

		Sur	rvey, %
Years	Army, %	Actual	Weighted
0-2	36.0	56.1	35.7
3-5	20.0	13.3	17.0
6-10	18.8	14.2	25.2
11-15	12.3	5.2	11.7
16-20	9.6	6.3	8.8
>20	2.4	4.9	1.6

Question 5. Highest Education Level

		Sur	vey, %
Education	Army, %	Actual	Weighted
High School	76.4	54.7	47.8
Some College	19.5	35.8	43.1
College	4.1	9.5	9.1

### Appendix B (Concluded)

Question 6. Ethnic/Racial

		Sur	vey, %
Background	Army, %	Actual	Weighted
White	58.7	63.8	56.9
Black	31.0	21.4	28.8
Hispanic	4.9	9.5	9.0
Indian/Alaskan	0.6	1.2	1.1
Asian/Pacific	1.9	2.7	2.7
Other	2.9	1.4	1.5

Question 7. Area Lived the Longest

		Sur	vey
Region	Army	Actual	Weighted
Middle Atlantic	10.1	12.5	12.4
East North Central	14.7	15.2	13.9
East South Central	8.2	8.1	8.0
West South Central	12.2	11.7	11.6
Pacific	10.3	12.3	11.9
New England	3.1	4.0	3.2
West North Central	6.1	5.8	5.6
Atlantic	23.0	21.1	24.3
Mountain	5.2	4.7	3.6
Other Territories	7.1	4.6	5.5

Appendix C. Reliability Check Foods

Table C-1. Comparison of Preferences for Food Names Duplicated in List 1 and List 2 Questionnaires\*

	PREF	PREF	PREF	PREF	PREF	PREF	
ITEM	MEAN 1	SD 1	N 1	MEAN 2	SD 2	N 2	DIFFERENCE
Dark Rye Bread	6.07	2.54	455.9	5.38	2.82	476.9	0.69
Low Fat Beef Patty	5.74	2.29	364.0	5.35	2.52	427.8	0.39
Whole Milk (3.2% Fat)	6.74	2.48	627.1	6.40	2.52	673.2	0.34
Apple Pie	7.36	1.96	634.8	7.03	2.20	658.0	0.33
Cholesterol-Free Eggs	5.57	2.63	288.0	5.28	2.86	349.3	0.29
Lasagna	7.93	1.50	778.6	7.69	1.86	798.7	0.24
Hero Sandwich	7.14	1.81	594.1	6.90	2.10	636.2	0.24
Baked Ham	6.85	1.95	7.797	6.61	2.13	796.0	0.24
Pork Sausage Links	6.57	2.21	622.2	6.34	2.40	658.5	0.23
Lasagna	7.73	1.70	688.8	7.52	1.97	719.2	0.21
Apples	7.46	1.74	711.0	7.26	1.87	713.7	0.20
Tuna Noodle Casserole	5.21	2.70	670.0	5.02	2.76	723.1	0.19
French Fried Potatoes	7.34	1.71	729.3	7.18	2.05	754.2	0.16
Shish Kabob	6.98	1.66	492.9	6.83	1.99	574.7	0.15
Broccoli	6.52	2.60	578.5	6.40	2.64	649.0	0.12
Creamed Chipped Beef	5.40	2.57	529.0	5.29	2.74	591.9	0.11
Harvard Beets	4.50	3.08	232.6	4.39	2.95	336.2	0.11
Cranberry Juice	5.61	2.70	553.1	5.51	2.75	570.3	0.10
Ham & Cheese Omelet	96.9	2.29	649.5	6.87	2.48	677.1	0.0
Minestrone Soup	5.89	2.32	406.4	5.80	2.35	459.8	0.0
High Fiber Cereal	6.36	2.32	519.4	6.28	2.23	574.3	0.08
Breaded/Fried Shrimp	7.45	2.27	697.8	7.44	2.28	732.5	0.01
Orange Juice	7.88	1.65	675.9	7.88	1.74	715.8	00.0
Broccoli	6.45	2.64	638.7	6.44	2.61	684.5	-0.02
Brewed Coffee	6.26	2.91	579.8	6.29	2.93	560.8	-0.03
Hamburger (w/Soy Prote	5.77	2.46	0.099	5.83	2.46	700.1	90.0-

Table C-1 (continued)

	PREF	PREF	PREF	PREF	PREF	PREF	
ITEM	MEAN 1	SD 1	N 1	_	SD 2	N 2	DIFFERENCE
Cucumber Onion Salad	5.27	2.54	400.2	5.33	2.68	516.2	90:0-
Fettuccini Alfredo	6.68	2.02	404.9		2.07	415.0	-0.08
<b>Tossed Green Salad</b>	7.00	1.99	683.8		2.00	724.7	-0.14
Beef Stick	6.55	2.02	444.6		1.99	460.6	-0.14
Buttermilk	3.54	2.55	474.7		2.76	415.8	-0.15
Spirulina Miama	5.04	2.93	71.1		2.37	81.0	-0.15
Rice Pilaf	5.98	2.40	385.7		2.24	409.6	-0.16
Rice Pudding	5.35	2.85	446.6		2.52	461.3	-0.16
Cholesterol-Free Eggs	5.12	2.73	344.7		2.78	374.0	-0.23
Creamed Chipped Beef	5.46	2.58	466.2		2.77	505.8	-0.28
Peas	5.45	2.47	669.7		2.56	722.8	-0.34
Stewed Prunes	2.94	2.57	235.3		2.83	252.6	-0.88

Table C-2. Comparison of Frequencies for Food Names Duplicated in List 1 and List 2 Questionnaires\*

	FREO	FREO	PCT	FREO	FREO	FREO	
ITEM	MEAN 1	SD 1	NT 1	MEAN 2	SD 2	N 2	DIFFERENCE
Whole Milk (3.2% Fat)	16.71	12.42	8.85	15.53	12.04	517.3	1.18
French Fried Potatoes	15.30	10.39	2.06	14.49	9.84	630.0	0.81
Brewed Coffee	19.67	13.26	13.70	19.13	12.35	437.2	0.54
Cholesterol-Free Eggs	11.70	11.99	51.23	11.22	10.81	256.9	0.48
Dark Rye Bread	11.94	12.22	26.22	11.51	11.12	334.4	0.43
High Fiber Cereal	13.34	11.56	21.28	12.93	9.86	425.2	0.41
Low Fat Beef Patty	9.63	9.48	39.67	9.23	10.08	290.6	0.40
Harvard Beets	7.24	10.11	55.98	6.95	10.10	230.6	0.29
Pork Sausage Links	12.07	10.80	8.23	11.87	10.46	524.8	0.20
Hero Sandwich	12.18	9.87	15.69	12.01	9.36	482.4	0.17
Tossed Green Salad	17.55	10.99	8.29	17.85	10.44	614.8	-0.30
Broccoli	12.49	10.43	12.35	13.06	11.00	499.7	-0.57
Rice Pudding	7.89	9.16	31.25	8.55	9.24	338.2	-0.66
Cholesterol-Free Eggs	11.36	11.50	49.48	12.15	11.25	284.7	-0.79
Lasagna	. 13.10	10.21	2.43	13.91	10.45	558.0	-0.81
Hamburger (w/Soy Protein)	9.71	9.36	10.36	10.54	9.69	549.5	-0.83
Apples	16.70	11.29	2.91	17.60	11.26	571.7	-0.90
Broccoli	11.91	10.16	11.05	12.83	10.63	542.6	-0.92
Ham & Cheese Omelet	14.87	11.81	4.78	15.84	10.77	526.5	-0.97
Buttermilk	4.39	8.13	31.98	5.45	8.68	301.2	-1.06
Beef Stick	10.55	10.03	31.91	11.66	9.57	324.8	-1.11
Fettuccini Alfredo	5.88	6.24	47.87	7.01	7.17	360.9	-1.13
Cranberry Juice	10.93	11.32	19.88	12.09	11.25	416.4	-1.16
	9.89	8.76	1.09	11.24	8.94	666.3	-1.35
Breaded/Fried Shrimp	14.13	10.94	5.95	15.61	10.91	582.5	-1.48

Table C-2 (continued)

	FREO	FREO	1	FREO	ll l	FREO	
ITEM	MEAN 1	SD 1	NT 1	MEAN 2	SD 2	N 2	DIFFERENCE
Orange Juice	20.99	11.25	2.95	22.53	10.43	583.5	-1.54
Tuna Noodle Casserole	5.02	6.64	12.59	6.61	8.33	555.0	-1.59
Baked Ham	7.50	8.20	1.19	9.10	8.62	638.3	-1,60
Peas	8.03	8.97	6.35	9.64	8.72	526.6	-1.61
Apple Pie	12.93	10.74	4.52	14.55	10.47	506.8	-1.62
Shish Kabob	7.53	8.27	33.48	9.52	8.81	448.7	-1.99
Creamed Chipped Beef	8.16	9.39	28.58	10.22	10.00	374.5	-2.06
Creamed Chipped Beef	7.41	8.71	28.92	9.63	10.59	478.7	-2.22
Cucumber Onion Salad	7.23	8.37	44.86	9.62	10.10	392.4	-2.42
Rice Pilaf	90.6	8.41	42.29	11.50	10.15	325.0	-2.44
Minestrone Soup	7.51	8.00	43.31	10.27	10.19	348.9	-2.76
Stewed Prunes	3.41	6.75	60.48	6.42	9.34	176.9	-3.01
Spirulina Miama	7.25	7.66	77.08	10.76	10.04	48.4	-3.51

Table C-3. Comparison of Preference Ratings for Food Names Duplicated Within Questionnaires\*

	PREF	PREF	PREF	PREF	PREF	PREF	DIFFERENCE
ITEM	MEAN 1	1 SD 1	N L	MEAN 2 SD 2	SD 2	N 2	
LIST1:							
Lasagna	7.93	1.50	778.6		1.70	688.8	
Creamed Chipped Beef	5.40	2.57	529.0	5.46	2.58	466.2	-0.06
Broccoli	6.42	2.64	638.7		2.60	578.5	
Cholesterol-Free Eggs	5.12	2.73	344.7		2.63	288.0	
LIST2:							
Lasagna	7.69	1.86	798.7	7.52	1.97	719.2	
Cholesterol-Free Eggs	5.35	2.78	374.0	5.28	2.86	349.3	0.07
Broccoli	6.44	2.61	684.5	6.40	2.64	649.0	
Creamed Chipped Beef		2.74	591.9	5.74	2.77	505.8	

<sup>\*</sup> Difference statistic is the first minus the second time sthe food name appeared on the questionnaire.

Table C- 4. Comparison of Frequency Ratings for Food Names Duplicated Within Questionnaires\*

ITEM	FREO MEAN 1	FREQ SD 1	FREQ N 1	PCT MIS 1	PCT NT 1	FREO FREO MEAN 2 SD 2	FREO SD 2	FREO N 2	PCT MIS 2	PCT NT 2	PCT NT 2 DIFFERENCE
LIST 1:											:
Cholesterol-Free Eggs Broccoli	11.36	11.50	231.7	22.07	49.48	11.70	11.99	193.0 449.6	25.06	51.23	-0.34 -0.34
Creamed Chipped Beef	7.41	8.71	401.7	21.75	28.92	8.16	9.39	339.5	29.72	28.58	-0.75
Lasagna	9.83	8.76	633.7	21.08	1.09	13.10	10.21	549.2	30.12	2.43	-3.21
LIST 2:											
Cholesterol-Free Eggs	12.15	11.25	284.7	20.01	46.06	11.22	10.81	256.9	25.46	43.92	0.93
Broccoli	12.83	10.63	542.6	28.03	7.30	13.06	11.00	499.7	31.04	9.40	-0.23
<b>Creamed Chipped Beef</b>	9.63	10.59	478.7	19.42	23.52	10.22	10.00	374.5	29.21	26.16	-0.59
Lasagna	11.24	8.94	666.3	19.14	1.45	13.91	10.45	558.0	31.13	2.37	-2.67
*Difference satistic is the first minus the second time the food name appeared on the	s the first m	inus the s	second tin	ne the foc	od name	appeared	on the				
questionnaire.		•							•		

Appendix D. Ranked Food Preference Ratings for 19 Food Groups.

# APPETIZERS, SNACKS, BARS, AND CANDY

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	Z	NEVER TRIED	MISSING
7	Mozzarella Sticks	7.16	2.09	649	17.70	5.00
_	Nachos	7.13	1.95	693	3.70	11.20
7	Potato Skins	6.98	1.98	503	22.60	17.40
7	Chewy Granola Bar	6.77	2.12	650	11.90	10.60
_	Popcorn	6.71	2.06	757	1.60	5.50
7	Beef Stick	69.9	1.99	461	31.00	14.10
7	Tortilla Chips	6.61	2.18	716	6.20	8.50
<del>-</del>	Beef Stick	6.55	2.02	445	31.90	13.50
_	Pretzels	6.30	2.17	636	6.70	15.20
7	Cereal Bar	6.24	2.11	559	24.00	9.50
<del>-</del>	Caramel Candy	6.17	2.50	691	7.00	8.20
_	Fruit Rollup	6.02	2.32	435	34.50	12.10
7	Quark	5.72	2.99	121	73.30	12.40
7	Spirulina Miama	5.19	2.37	81	77.30	13.10
<del>-</del>	Spirulina Miama	5.04	2.93	71	77.10	14.20
7	Cloud Ears	4.63	2.69	109	75.50	11.50

### BEVERAGES

LIST	ITEM	MEAN	SD	Z	PERCENT NEVER TRIED	PERCENT MISSING
<del></del>	Bottled Spring Water	7.52	1.87	583	14.30	14.20
<del>-</del>	Hot Chocolate	7.47	1.80	707	2.60	10.60
<b>~</b>	Cola Beverage	7.29	2.12	712	2.70	9.80
7	Iced Tea	7.17	2.46	705	4.40	11.60
7	Brewed Coffee	6.29	2.93	561	18.20	15.00
<del>-</del>	Brewed Coffee	6.26	2.91	280	13.70	15.10
2	Instant Coffee	5.06	3.02	604	17.20	10.80

# MEAT COMBINATION/CASSEROLE ITEMS

					DEBCENT	DEBCENT
LIST	ITEM	MEAN	SD	Z	NEVER TRIED	MISSING
_	Fajitas	7.27	2.03	482	25.60	15.30
_	Burritos	7.17	1.98	604	8.90	17.00
7	Tacos	7.15	2.01	069	4.20	13.60
<del>-</del>	Chicken Pot Pie	6.82	2.04	585	11.40	16.70
_	Tostados	6.81	2.11	479	27.20	14.00
-	Szechuan Chicken	6.72	2.14	252	53.60	15.50
7	Enchiladas	6.70	2.33	637	16.60	7.60
-	Chili Con Carne	6.57	2.22	556	20.10	11.70
7	Tamales	6.36	2.46	581	23.70	7.10
_	Braised Beef & Noodles	6.21	2.14	531	27.70	7.10
_	Chicken Croquettes	6.19	2.25	211	55.20	18.90
7	Hungarian Goulash	6.18	2.52	308	47.10	16.10
7	Chicken Cacciatore	6.07	2.32	442	30.10	17.30
7	Creole Chicken	90.9	2.18	413	34.20	16.70
7	New England Boiled Dinner	6.05	2.53	249	54.80	15.60
<del>-</del>	African Chili	00.9	2.47	165	67.10	12.60
~	Chop Suey	5.97	2.15	569	25.60	4.50
_	El Rancho Stew	5.95	2.27	289	52.20	12.30
7	Moussaka	5.94	2.70	109	72.80	14.20
_	American Chop Suey	5.74	2.51	322	45.30	15.10
-	Ham, Pasta & Tomato Casserole	5.60	2.69	287	55.20	9.50
7	Yakisoba	5.60	2.50	216	61.60	12.70
7	Stuffed Green Peppers	5.59	2.74	533	20.80	15.70
7	Chicken Noodle Casserole	5.56	2.38	639	16.70	7.10
7	Scalloped Ham & Noodles	5.47	2.53	513	26.60	12.20
-	Beef & Corn Pie	5.36	2.26	423	40.70	7.30
_	Tuna Noodle Casserole	5.21	2.70	670	12.60	5.10
7	Tuna Noodle Casserole	5.02	2.76	723	11.30	2.50
7	Chicken Ala King	4.27	2.87	631	14.10	10.70
-	Corned Beef Hash	4.26	2.59	099	12.20	6.80

## **BREADS AND PASTRIES**

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	Z	NEVER TRIED	MISSING
_	Garlic Bread	7.58	1.87	672	4.80	12.70
<del></del>	Cinnamon Sweet Rolls	7.39	1.74	630	5.30	17.30
<del>-</del>	Whole Wheat Bread	7.18	1.97	619	7.30	16.70
2	Doughnuts	7.05	2.06	682	3.20	15.60
<del>-</del>	Blueberry Muffin	06.9	2.07	673	06.90	10.50
_	Corn Bread	6.87	2.10	640	2.00	16.50
_	English Muffins	6.84	2.01	809	11.80	13.60
2	White Bread	6.84	2.27	717	2.70	11.80
2	Bagels	6.65	2.21	631	15.50	9.40
-	Dark Rye Bread	6.07	2.54	456	26.20	17.80
2	Dark Rye Bread	5.38	2.82	477	25.60	17.50

### BREAKFAST FOODS

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	N	NEVER TRIED	MISSING
<b>-</b>	Cold Cereals (Assorted)	7.09	1.87	722	3.70	7.60
7	French Toast	7.09	1.91	678	3.90	15.30
-	Ham & Cheese Omelet	96.9	2.29	650	4.80	15.50
7	Ham & Cheese Omelet	6.87	2.48	677	90.9	13.30
<del>-</del>	Deviled Eggs	6.84	2.29	558	13.10	18.30
7	Breakfast Sandwich	6.74	2.15	547	20.70	14.10
7	Pancakes	6.67	2.11	992	1.30	7.40
7	Bacon	6.67	2.33	992	1.60	7.20
7	Eggs to Order	99.9	2.23	697	2.60	11.30
-	Pork Sausage Links	6.57	2.21	622	8.20	15.40
_	High Fiber Cereal	6.36	2.32	519	21.30	14.90
7	Fruit Filled Cereal Bars	6.35	2.17	574	25.20	6.40
7	Pork Sausage Links	6.34	2.40	629	11.00	10.50
-	Western Omelet	6.30	2.23	611	19.80	5.10
7	High Fiber Cereal	6.28	2.23	574	17.90	13.70
7	Hot Oatmeal	6.23	2.47	609	8.60	16.70
7	Breakfast Pizza	5.88	2.53	454	38.50	7.40
7	Instant Breakfast Drink	5.78	2.28	514	28.60	8.20
7	Corn Fritters	5.71	2.21	362	46.30	9.30
7	Hot Cream of Wheat	5.36	2.70	637	16.70	7.40
7	Quiche Lorraine	5.20	2.47	191	68.10	8.50
7	Hominy Grits	5.16	3.01	574	24.00	7.60

### DAIRY PRODUCTS

LIST	ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT
7	Milk Shake	7.51	1.87	707	4.20	11.50
7	Ice Cream	7.50	1.93	697	2.80	14.10
7	Soft Serve Ice Cream	7.37	1.97	710	3.10	12.30
<b>-</b>	Hot Fudge Sundae	7.09	2.16	642	7.10	14.10
7	Chocolate Milk	6.84	2.26	757	3.30	6.50
<del></del>	Whole Milk (3.2% Fat)	6.74	2.48	627	8.90	14.10
<b></b>	Sherbet	6.72	2.19	663	12.10	6.60
7	Whole Milk (3.2% Fat)	6.40	2.52	673	08.9	13.00
7	Frozen Yogurt	6.27	2.69	515	24.50	14.20
7	Yogurt w/Fruit	6.13	2.62	581	22.00	13.40
7	Butter	5.91	2.36	770	2.80	5.50
_	Margarine	5.80	2.14	658	5.60	13.60
<b>—</b>	Feta Cheese	5.49	2.27	257	61.80	9.90
7	Skim Milk	4.94	2.86	579	19.20	11.90
7	Cottage Cheese	5.09	2.87	563	21.60	11.30
7	Buttermilk	3.69	2.76	416	36.30	14.10
<del>-</del>	Buttermilk	3.54	2.55	475	32.00	9.70

### DESSERTS

LIST	LIST ITEM	MEAN	SD	Z	PERCENT NEVER TRIED	PERCENT MISSING
_	Chocolate Chip Cookie	7.47	1.85	999	3.90	14.40
۳-	Strawberry Shortcake	7.40	2.01	644	5.30	15.60
<del></del>	Apple Pie	7.36	1.96	635	4.50	17.50
7	Cheesecake	7.32	2.12	642	9.80	13.80
7	Apple Pie	7.03	2.20	658	3.90	17.70
<del>-</del>	Strudel	6.86	1.72	450	39.70	5.10
_	Brownies	98.9	2.11	704	4.80	8.80
_	Oatmeal Cookies	98.9	2.11	663	4.90	13.60
7	Strawberry Chiffon Pie	6.70	2.20	327	44.20	16.80
7	Devils Food Cake	99.9	2.15	614	12.30	14.60
<del></del>	Lemon Meringue Pie	6.64	2.30	265	16.20	10.50
7	Cherry Pie	6.52	2.44	269	09.9	10.40
7	Boston Cream Pie	6.52	2.09	402	36.10	16.00
7	Peanut Butter Cookies	6.49	2.39	109	4.90	10.60
7	Chocolate Pudding	6.48	2.53	720	4.40	9.80
-	Blueberry Cake	6.37	2.18	572	20.40	9.40
7	White Cake	6.30	2.13	629	11.30	13.80
7	Carrot Cake	6.23	2.57	641	15.10	8.50
7	Apple Coffee Cake	6.19	2.26	458	33.80	11.70
7	Vanilla Pudding	6.11	2.41	768	4.10	4.30
2	Ginger Cookies	6.02	2.36	549	19.20	15.30
<del>-</del>	Gingerbread	5.76	2.30	571	19.10	10.80
_	Spice Cake	5.69	2.26	556	23.50	8.20
7	Coconut Raisin Cookies	5.66	2.69	541	28.80	6.80
_	Tapioca Pudding	5.57	2.73	438	30.90	15.40
7	Rice Pudding	5.51	2.52	461	31.80	13.20
-	Rice Pudding	5.35	2.85	447	31.30	13.90
-	Bread Pudding	5.23	2.71	404	33.70	16.70
-	Mincemeat Pie	4.27	2.71	297	55.10	8.40

### DIET/VEGETARIAN

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	Z	<b>NEVER TRIED</b>	MISSING
-	Bottled Spring Water	7.52	1.87	583	14.30	14.20
-	Stir-Fried Vegetables	6.64	2.09	999	12.30	9.00
<b>-</b>	Granola Cereal	6.39	2.26	494	29.60	9.80
<del></del>	Granola Bar	6:39	2.33	539	14.70	19.10
7	Trail Mix	6.22	2.44	583	25.60	4.90
7	Carob Coated Snack B	6.18	2.49	186	62.00	15.80
<del>-</del>	Unsalted Peanuts	5.76	2.42	586	13.10	14.90
<del>-</del>	Low Fat Beef Patty	5.74	2.29	364	39.70	15.60
7	Lentil Loaf	5.62	2.57	146	63.20	19.40
<del></del>	Vegetarian Baked Bean	5.58	2.55	322	51.70	8.80
<del></del>	Cholesterol-Free Eggs	5.57	2.63	288	51.20	13.40
7	Low Calorie Salad Dres	5.55	2.68	609	17.30	10.10
<del></del>	Spinach Lasagna	5.40	2.92	244	59.70	10.30
7	Cholesterol-Free Eggs	5.35	2.78	374	46.10	9.40
7	Low Fat Beef Patty	5.35	2.52	428	33.30	15.70
_	Diet Milkshake	5.33	2.88	289	49.00	15.50
7	Vegetarian Chili	5.30	2.78	209	60.40	14.70
7	Cholesterol-Free Eggs	5.28	2.86	349	43.90	14.50
7	Vegetarian Hot Dog	5.25	2.65	186	65.70	12.10
_	Cholesterol-Free Eggs	5.12	2.73	345	49.50	8.20
7	Skim Milk	4.94	2.86	579	19.20	11.90
<del></del>	Tofu Rice Burgers	4.72	3.01	126	06.69	14.70
	Plain Yogurt	4.45	2.83	445	32.70	14.30
7	Diet Cola	4.40	2.91	575	14.10	17.30
2	Decaffeinated Coffee	3.92	2.83	586	24.60	5.60

## FRUIT AND VEGETABLE JUICES

IST	HEM	MFAN	CS	z	NEVER TRIED	MISSING
	Orange Juice	7.88	1.65	929	3.00	14.10
	Orange Juice	7.88	1.74	716	2.60	12.10
	Bananas	7.43	2.02	694	3.20	14.10
	Lemonade	7.26	1.90	675	3.90	13.20
	Fruit Punch	7.19	1.99	695	2.90	11.70
	Apple Juice	7.17	2.17	748	3.10	5.00
	Pineapple Juice	6.82	2.18	670	6.10	14.00
	Instant Orange Beverag	5.83	2.45	578	14.70	14.30
	Cranberry Juice	5.61	2.70	553	19.90	12.20
	Cranberry Juice	5.51	2.75	570	18.40	13.60
	Vegetable Juice	5.26	2.83	701	11.00	5.50
	Tomato Juice	4.38	2.76	620	16.40	7.50

LIST	LIST ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT MISSING
_	Grapes	7.71	1.79	701	2.90	11.00
<b>,-</b> -	Oranges	7.46	1.79	746	1.30	7.10
<del>-</del>	Apples	7.46	1.74	711	2.90	9.80
_	Fruit Cocktail	7.26	1.88	723	2.90	8.30
<b>*</b>	Watermelon	7.26	2.18	638	4.00	17.70
7	Apples	7.26	1.87	714	2.20	12.70
-	Pineapple	7.15	2.03	732	3.30	6.80
7	Peaches	7.15	2.10	768	2.00	6.50
-	Pears	6.84	2.06	720	2.40	9.10
-	Applesauce	6.75	2.24	649	5.30	15.10
7	Cantaloupe	6.70	2.60	727	7.50	5.90
2	Dark Sweet Cherries	6.16	2.42	564	25.20	7.60
7	Raisins	5.81	2.39	661	5.70	15.50
7	Grapefruit Half	5.34	2.73	663	11.10	9.80
7	Dried Apricots	5.20	2.86	343	48.60	10.50
<del></del>	Dried Dates	3.98	2.65	413	41.70	7.60
7	Stewed Prunes	3.82	2.83	253	56.90	13.00
-	Stewed Prunes	2.94	2.57	235	60.50	10.60

### **MEATS AND POULTRY**

					PERCENT	PERCENT
LIST	ITEM	MEA	SD	z	NEVER TRIED	MISSING
7	Grilled Steak	7.53	1.86	741	2.90	8.80
_	Barbecued Spareribs	7.49	1.80	745	2.40	6.10
_	Grilled Chicken Breast	7.44	1.75	652	7.70	12.30
-	Fried Chicken	7.31	1.94	759	09.0	6.10
<del>-</del>	Roast Turkey	7.29	1.70	737	1.40	8.10
-	Buffalo Wings	7.29	1.95	514	23.50	13.40
7	Roast Beef	7.18	1.84	677	3.00	16.30
7	Chicken Nuggets	7.16	1.84	634	4.30	20.10
7	Jaegerschnitzel	7.15	2.11	370	45.80	10.10
7	Mesquite Grilled Meats	7.14	2.07	435	34.30	13.80
<del>-</del>	Pepper Steak	7.07	1.96	099	8.40	10.60
7	Steak Ranchero	7.01	1.96	492	34.30	7.10
<del>-</del>	Shish Kabob	6.98	1.66	493	33.50	9.00
<b>,</b>	Chinese Five Spice Chic	96.9	2.06	322	52.00	8.50
7	Chicken Cordon Bleu	6.94	2.15	551	23.20	11.10
_	Hawaiian Chicken	6.91	2.01	335	44.60	14.20
-	Italian Sausage	6.87	1.97	574	13.40	16.10
-	Swiss Steak	98'9	1.79	675	8.40	8.70
-	Baked Ham	6.85	1.95	168	1.20	4.50
7	Shish Kabob	6.83	1.99	575	26.30	5.20
-	Sweet & Sour Chicken	6.82	2.08	631	13.80	8.70
_	Chicken Teriyaki	6.81	1.93	470	25.40	16.80
7	Baked Chicken	6.81	2.10	711	3.60	11.70
7	Teriyaki Beef	6.79	2.27	585	22.40	7.90
-	Baked Stuffed Pork Cho	6.76	2.06	587	18.50	9.40
_	Chicken Oriental	6.74	2.06	480	29.60	11.40
7	Salisbury Steak	6.68	2.13	089	2.00	13.90
7	Bratwurst	99.9	2.18	453	32.50	13.50
7	Honey Glazed Rock Cor	6.64	2.05	466	27.50	17.10
-	Tandoori Chicken	6.63	2.12	175	70.40	8.10

## **MEATS AND POULTRY**

	and the state of t				PERCENT	PERCENT
LIST	ITEM	MEA	SD	Z	<b>NEVER TRIED</b>	MISSING
7	Baked Ham	6.61	2.13	796	1.50	3.70
_	Grilled Lamb Chops	6.58	2.18	513	30.00	7.00
<del>-</del>	Ginger Pot Roast	6.57	2.05	374	38.80	15.30
7	Curried Chicken	6.47	2.37	545	25.70	9.40
7	Swedish Meatballs	6.35	2.08	562	20.30	12.80
_	Meat Loaf	6.32	1.98	763	0.50	5.80
<b>-</b>	Sukiyaki	6.17	2.40	303	48.10	14.70
7	Veal Parmesan	6.13	2.31	725	8.10	5.50
7	Roast Pork	6.10	2.19	741	5.50	6.20
7	Glazed Ham Loaf	90.9	2.40	583	18.10	12.50
7	Spareribs & Sauerkraut	90.9	2.65	483	28.70	13.70
-	Sausage Stuffing	6.04	2.27	311	54.90	9.30
7	Kielbasa	5.86	2.73	345	51.10	7.80
7	Tapas	5.82	2.29	121	70.80	14.70
<del>-</del>	Sauerbraten	5.79	2.35	223	56.50	16.20
7	Creamed Chipped Beef	5.74	2.77	206	26.20	13.60
7	Vienna Sausage	5.57	2.53	651	13.00	9.40
<b>,</b>	Creamed Ground Beef	5.49	2.68	543	23.90	9.40
<del>-</del>	Creamed Chipped Beef	5.46	2.58	466	28.60	14.20
<del></del>	Creamed Chipped Beef	5.40	2.57	529	28.90	6.10
7	Creamed Chipped Beef	5.29	2.74	592	23.50	5.90
<del>-</del>	Corned Beef	5.14	2.60	595	15.90	11.00
7	Chitterlings	4.98	3.26	329	50.40	10.30
<del>-</del>	Pigs Feet	4.64	3.07	388	39.30	13.10
2	Braised Liver w/Onions	4.10	3.09	629	17.50	4.00

#### PASTA DISHES

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
-	Lasagna	7.93	1.50	779	1.10	3.30
7	Pizza	7.92	1.54	782	1.00	5.90
-	Lasagna	7.73	1.70	689	2.40	13.00
<b>,-</b>	Spaghetti w/Meat Sauc	7.71	1.52	732	1.40	8.70
7	Lasagna	7.69	1.86	799	1.50	3.40
7	Lasagna	7.52	1.97	719	2.40	11.90
<b>-</b>	Macaroni & Cheese	7.23	1.94	674	3.10	14.10
7	Fettuccini Alfredo	6.76	2.07	415	48.50	2.10
-	Fettuccini Alfredo	6.68	2.02	405	47.90	2.40
7	Stuffed Shells	6.65	2.31	326	51.80	9.30
7	Ravioli	09'9	2.20	735	4.60	7.80
7	Buttered Noodles	6.11	2.08	809	14.30	13.30
7	Chili Macaroni	5,85	2.40	735	6.90	5.50

#### **SALAD DRESSINGS**

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
7	Ranch Dressing	06.9	2.33	909	13.60	14.10
7	Italian Salad Dressing	6.30	2.27	658	11.40	10.20
_	Russian Dressing	5.81	2.45	282	20.00	15.40
1	Blue Cheese Salad Dre	5.10	2.78	508	29.20	8.50

LIST	ITEM	MEAN	SD	Z	PERCENT NEVER TRIED	PERCENT MISSING
7	Chef's Salad w/Meat &	7.45	1.94	709	7.30	8.20
_	Taco Salad	7.27	1.76	691	9.60	5.50
7	Tossed Green Salad	7.14	2.00	725	4.50	9.20
<del></del>	Tossed Green Salad	7.00	1.99	684	8.30	7.70
_	Pasta Salad	6.43	2.13	539	22.40	11.40
_	Jellied Fruit Salad	6.21	2.32	458	27.00	16.80
7	Guacamole Salad	5.85	2.86	326	48.60	12.60
<del></del>	Cole Slaw	5.74	2.65	598	10.00	16.50
_	Frijole Salad	5.66	2.34	217	63.90	9.50
7	Hot (German) Potato S	5.66	2.63	441	39.60	7.90
<b>-</b>	Waldorf Salad	5.61	2.34	252	54.00	15.00
7	Sliced Tomato Salad	5.60	2.69	909	23.10	4.70
7	Cucumber Onion Salad	5.33	2.68	516	32.20	6.30
7	Three Bean Salad	5.29	2.42	347	43.80	14.90
-	Cucumber Onion Salad	5.27	2.54	400	44.90	9.00
2	Carrot & Raisin Salad	5.13	2.74	326	43.60	17.50
-	Spinach Salad	4.64	2.81	383	44.10	8.80

#### SANDWICHES

					PERCENT	PERCENT
LIST	ITEM	MEA	SD	Z	NEVER TRIED	MISSING
7	Hamburger (100% Ground B	7.55	2.01	691	1.80	15.90
<del></del>	Gyros	7.32	1.85	409	35.90	13.90
7	Cheese Steak Sandwich	7.20	2.01	657	13.30	8.50
_	Calzone	7.16	2.09	285	56.30	8.70
7	Turkey Breast Sandwich	7.15	1.94	756	3.70	6.20
-	Hero Sandwich	7.14	1.81	594	15.70	11.30
<b></b>	Grilled Ham & Cheese Sand	7.10	1.80	723	2.00	9.20
7	Hot Turkey Sandwich w/Gra	7.04	2.08	693	7.40	10.00
_	BLT Sandwich	7.01	2.06	626	9.90	16.50
2	Turkey Ham Sandwich	6.91	1.97	650	8.20	14.40
7	Hero Sandwich	06.9	2.10	636	17.10	7.10
2	Seafood Salad Sandwich	6.78	2.36	397	37.80	15.00
_	Chili Dog	6.71	2.21	644	4.20	16.80
7	Sloppy Joe Sandwich	6.59	2.24	206	4.10	11.70
<b>,</b>	Frankfurters	6.45	1.96	687	7.10	8.60
-	Chicken Salad Sandwich	6.43	2.12	643	10.50	10.60
<del>-</del>	Fishwich	6.43	2.09	530	23.90	11.00
. 7	Meatball Submarine Sandwic	6.43	2.30	616	16.50	10.10
7	Peanut Butter & Jelly Sandw	6.39	2.41	751	3.00	7.50
<del>-</del>	Tuna Salad Sandwich	6.35	2.20	683	9.30	06.9
<del>-</del>	Ham Salad Sandwich	6.14	2.33	502	24.40	14.00
7	Hamburger (w/Soy Protein)	5.83	2.46	200	8.60	8.00
<del>-</del>	Hamburger (w/Soy Protein)	5.77	2.46	099	10.40	8.60
7	Liverwurst Sandwich	4.94	2.82	321	46.80	14.90

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
<b>-</b>	Breaded/Fried Shrimp	7.45	2.27	698	0.00	8.40
7	Breaded/Fried Shrimp	7.44	2.28	733	5.10	7.70
_	Catfish	69.9	2.53	559	17.90	13.50
7	Breaded & Fried Fish Fillet	6.62	2.41	705	9.90	9.40
7	Shrimp Jambalaya	6.61	2.55	327	45.80	15.20
-	Baked Fish	6.56	2.29	667	8.50	9.60
7	Salmon Fillet	6.52	2.59	583	21.20	9.40
-	Cajun Blackened Fish	6.49	2.43	305	57.30	5.30
7	Herb Baked Fish	6.46	2.26	403	37.30	14.70
_	Tempura Battered Fish	6.36	2.34	317	47.30	13.70
-	Broiled Fish Fillet	6.34	2.26	631	15.70	6.90
_	Paella	6.15	2.55	120	78.50	6.80
7	Fried Clams	6.01	2.78	533	31.00	5.60
7	Tomato Calamari	5.59	2.50	169	65.20	14.60
-	Sardines	4.98	2.84	473	26.50	15.40

LIST	ITEM	MEAN	SD	Z	PERCENT NEVER TRIED	PERCENT MISSING
-	Chicken Noodle Soup	6.97	1.78	701	4.00	10.00
7	Soup-Salad Combo	6.55	2.06	525	26.20	11.30
7	Soup-Sandwich Combo	6.44	2.12	591	18.60	10.90
7	Vegetable Soup	6.38	2.30	716	5.70	9.00
7	Instant Noodle Soup	6.23	2.24	612	14.00	13.10
<b>-</b>	Minestrone Soup	5.89	2.32	406	43.30	9.80
7	Minestrone Soup	5.80	2.35	460	38.90	6.30
_	Cream of Mushroom Soup	5.58	2.65	448	29.50	15.50
7	French Onion Soup	5.45	2.56	472	33.00	10.80
τ-	Tomato Soup	5.15	2.66	617	15.00	9.30
<b></b>	Peanut Soup	4.38	2.86	97	76.50	11.60
<del></del>	Green Pea Soup	4.19	2.73	403	40.90	9.60

#### STARCHES

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	Z	NEVER TRIED	MISSING
-	French Fried Potatoes	7.34	1.71	729	2.10	8.40
_	Baked Potato	7.26	1.80	656	4.70	14.70
7	French Fried Potatoes	7.18	2.05	754	2.10	8.00
-	Hashed Brown Potatoes	7.09	1.87	650	5.50	14.60
7	Spiral French Fries	7.08	2.08	714	10.90	4.00
<del></del>	Fried Rice	7.06	1.85	652	8.00	11.90
7	Mashed Potatoes	7.00	1.99	069	3.20	14.60
7	Stuffed Baked Potato	6.97	2.03	627	11.00	14.40
-	Steamed White Rice	9.79	2.09	719	3.80	8.00
-	Parsley Seasoned Potatoes	99.9	2.07	438	30.00	16.20
7	Spanish Rice	99'9	2.22	672	11.20	8.70
7	Brown Rice	6.47	2.17	533	18.10	18.30
_	Dirty Rice	6.40	2.33	305	50.20	12.30
<b>,</b>	Savory Bread Stuffing	6.39	2.11	441	39.70	6.10
7	Red Beans & Rice	6.37	2.63	550	23.00	11.40
7	Wild Rice	6.33	2.29	554	25.90	8.10
7	Rice Pilaf	6.14	2.24	410	38.10	13.10
-	Spaetzle	90.9	2.59	148	65.00	16.80
-	Refried Beans	6.04	2.41	532	20.00	14.60
7	Glazed Sweet Potatoes	9.00	2.62	585	18.40	11.90
<b>.</b>	Rice Pilaf	5.98	2.40	386	42.30	10.40
2	Rissole Potatoes	5.84	2.05	248	58.40	12.10
<del></del>	Potatoes Au Gratin	5.44	2.67	620	12.80	11.10

#### **VEGETABLES/VEGETABLE DISHES**

L	No.	MEAN	S	Z	PERCENT NEVER TRIED	PERCENT
2	I LIVI	INICAIN	200	2		O I
2	Whole Kernel Corn	7.30	1.92	693	4.70	12.70
7	Egg Rolls	6.78	2.31	809	15.20	12.30
	Stir-Fried Vegetables	6.64	2.09	999	12.30	9.00
_	Fried Onion Rings	6.59	2.22	617	10.30	13.90
<b>,</b>	Broccoli	6.52	2.60	579	12.40	16.60
7	Broccoli	6.44	2.61	685	7.30	11.10
<del></del>	Broccoli	6.42	2.64	639	11.10	10.50
_	Mexican Corn	6.41	2.34	349	38.30	18.90
7	Broccoli	6.40	2.64	649	9.40	13.30
2	Green Beans	6.30	2.27	720	2.00	9.20
7	Sauteed Mushrooms	6.27	2.70	614	24.50	2.40
<b>,-</b> -	Ratatouille	6.09	1.93	188	74.00	3.00
7	Buttered Mixed Vegetables	6.08	2.22	209	16.10	11.60
_	Turnip Greens	5.90	2.77	482	31.90	8.90
<b>.</b>	Black Eyed Peas	5.89	2.70	534	21.00	13.40
7	Chinese Cabbage	5.83	2.62	318	48.50	13.60
~	Peas	5.79	2.56	723	4.20	9.70
_	Cauliflower au Gratin	5.56	2.58	. 348	47.40	9.90
7	Collard Greens	5.52	3.01	596	24.80	4.10
7	Fried Okra	5.52	3.00	522	30.10	7.80
_	Peas	5.45	2.47	670	6.40	11.40
<del></del>	Cooked Cabbage	5.43	3.00	687	9.10	09.9
7	Snow Peas	5.36	2.68	346	52.40	6.30
2	Buttered Carrots	5.30	2.51	809	18.80	8.70
<del></del>	Eggplant Parmesan	5.19	2.88	207	29.90	14.70
7	Fried Eggplant	5.15	3.03	317	48.90	13.30
_	Lyonnaise Carrots	5.09	2.46	184	67.20	10.20
7	Sauerkraut	2.00	2.89	487	24.00	18.10
7	Carrots Amandine	4.99	2.61	218	62.80	11.30

#### **VEGETABLES/VEGETABLE DISHES**

LIST	ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT MISSING
-	Asparagus	4.88	3.02	460	33.50	10.10
_	Spinach	4.77	2.96	620	16.40	7.50
-	Brussels Sprouts	4.61	2.79	458	33.10	10.60
7	Zucchini Squash	4.58	2.84	477	32.80	10.40
-	Harvard Beets	4.50	3.08	233	26.00	15.50
_	Stewed Tomatoes	4.42	2.78	426	33.90	13.80
_	Lima Beans	4.41	2.86	634	14.90	7.20
2	Harvard Beets	4.39	2.95	336	47.80	12.10

Appendix E. Ranked Preference Ratings With Frequencies, All Foods.

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	<b>NEVER TRIEC</b>	Ŋ	MEAN
-	Lasagna	7.93	1.50	7	1.09	3.28	9.89
α	Pizza	7.92	1.54	782	1.00	5.85	11.65
0	Orange Juice	7.88	1.74	-	2.60	12.09	22.53
_	Orange Juice	7.88	1.65	676	2.95	14.05	20.99
-	Lasagna	7.73	1.70	689	2.43	12.98	13.10
-	Grapes	7.71	1.79	701	2.89	10.97	17.53
-	Spaghetti w/Meat Sauce	7.71	1.52	732	1.41	8.67	11.84
2	Lasagna	7.69	1.86	O	1.45	3.37	11.24
-	Garlic Bread	7.58	1.87	672	4.78	12.72	13.35
7	Hamburger (100% Ground Beef)	7.55	2.01	691	1.83	15.85	16.26
7	Grilled Steak	3	1.86	741	2.94	8.76	12.66
N	Lasagna		1.97		2.37	11.92	13.91
-	Bottled Spring Water	7.52	1.87	ω	14.29	14.15	20.39
N	Milk Shake	7.51	1.87	707	4.16	11.54	17.04
2	Ice Cream	7.50	1.93	O	2.83	14.05	16.35
<del>-</del>	Barbecued Spareribs	7.49	1.80	745	2.37	6.12	9.90
<del></del>	Hot Chocolate	•	1.80	0	2.58	10.62	17.64
-	Chocolate Chip Cookies	7.47	1.85	665	3.88	14.44	14.83
-	Apples	7.46	1.74	711	2.91	9.78	16.70
-	Oranges	7.46	1.79	746	1.30	7.06	18.12
N		4	1.94	709	7.32	8.16	17.66
-		7.45	2.27	698	5.95	8.35	14.13
<del>-</del>	Grilled Chicken Breast	7.44	1.75	652	7.69	12.25	12.33
Ø	Breaded/Fried Shrimp	7.44	2.28	733	5.05	7.65	15.61
Ø	Bananas	7.43	2.02	694	3.22	14.06	18.97
-	Strawberry Shortcake	7.40	2.01	644	5.31	15.64	12.79
-	Cinnamon Sweet Rolls	7.39	1.74	630	5.34	17.26	12.89
Q	Soft Serve Ice Cream	7.37	1.97	710	3.09	12.33	16.56
_		7.36	1.96		4.52	17.51	12.93
· •	French Fried Potatoes	7.34	1.71	729	2.06	8.38	15.30

					6	/6	
LIST	ITEM	MEAN	SD	Z	NEVER TRIEC	Ŋ	MEAN
<b></b>	Gyros	7.32	1.85	409	35.91	13.87	12.41
8	Cheesecake	7.32	2.12	642	9.79	13.75	14.07
-	Fried Chicken	7.31	1.94	759	0.64	6.11	10.40
7	Whole Kernel Corn	7.30	1.92	693	4.65	12.72	15.17
	Buffalo Wings	7.29	1.95	514	23.48	13.39	12.75
-	Roast Turkey	7.29	1.70	737	1.43	8.12	8.76
-	Cola Beverage	7.29	2.12	712	2.67	9.83	19.84
-	Taco Salad	7.27	1.76	6	9.59	5.50	10.43
-	Fajitas	7.27	2.03	482	25.59	15.28	12.93
-	Fruit Cocktail	7.26	1.88	S	2.91	8.34	14.82
-	Lemonade	7.26	1.90	675	3.89	13.17	ന
7	Apples	7.26	1.87	714	2.20	12.74	17.60
-	Watermelon	7.26	2.18	638	4.01	17.65	13.19
-	Baked Potato	7.26	1.80	656	4.70	14.70	13.21
-	Macaroni & Cheese	7.23	1.94	674	3.12	14.08	13.11
03	Cheese Steak Sandwich	7.20	2.01	657	13.26	8.48	12.82
<b></b>	Fruit Punch	7.19	1.99	695	2.89	11.73	15.85
<b>*</b> N	Roast Beef	7.18	1.84	677	0	16.31	13.00
Ø	French Fried Potatoes	7.18	2.05	754	2.11	8.00	4.
-	Whole Wheat Bread	7.18	1.97	619	7.30	16.72	17.75
-	Burritos	7.17	1.98	604	8.85	17.03	11.37
Ø	Iced Tea	7.17	2.46	705	4.37	11.62	9.
-	Apple Juice	7.17	2.17	748	3.10	4.99	17.24
Ø	Mozzarella Sticks	7.16	2.09	649	17.66	4.96	10.77
0	Chicken Nuggets	7.16	1.84	634	4.32	20.10	13.13
₹÷	Calzone	7.16	2.09	285	56.25	8,69	9.83
0	Peaches	7.15	2.10		1.97	6.53	16.39
-	Pineapple	7.15	2.03	က	3.25	6.84	14.73
Ŋ	Tacos	7.15		တ	4.17	13.59	14.02
N	Jaegerschnitzel	7.15	2.11	370	45.81	10.05	13.71

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIEC	9	MEAN
Ø	Turkey Breast Sandwich	7.15	1.94	756	3.70	6.19	13.11
N	Tossed Green Salad	7.14	2.00	725	4.45	9.18	17.85
Ŋ	Mesquite Grilled Meats	7.14	2.07	435	34.30	13.84	13.32
<del></del>	Hero Sandwich	7.14	1.81	594	15.69	11.34	12.18
-	Nachos	7.13	1.95	693	3.68	11.22	11.44
-	Grilled Ham & Cheese Sandwich	7.10	1.80	723	1.99	9.17	12.38
-	Hot Fudge Sundae	7.09	2.16	642	7.06	14.11	12.17
-	Hashed Brown Potatoes	7.09	1.87	650	5.53	14.61	14.24
-	Cold Cereals (Assorted)	7.09	1.87	722	3.70	7.60	18.08
7	French Toast	7.09	1.91	678	3.92	15.34	16.04
2	Spiral French Fries	7.08	2.08	714	10.93	4.00	13.94
-	Pepper Steak	7.07	1.96	099	8.40	10.59	11.54
_	Fried Rice	7.06	1.85	652	8.02	11.89	11.72
8	Doughnuts	7.05	2.06	682	3.18	15.59	14.05
7	Hot Turkey Sandwich w/Gravy	7.04	2.08	693	7.40	10.01	11.83
N	Apple Pie	7.03	2.20	658	3.89	17.68	14.55
N	Steak Ranchero	7.01	1.96	492	34.30	7.07	11.51
<b>-</b>	BLT Sandwich	7.01	5.06	626	6.59	16.50	12.78
-	Tossed Green Salad	7.00	1.99	684	8.29	7.73	17.55
7	Mashed Potatoes	7.00	1.99	690	3.20	14.62	14.57
N	Potato Skins	6.98	1.98	503	22.59	17.44	12.39
-	Shish Kabob	6.98	1.66	493	33.48	5.99	7.53
-	Chicken Noodle Soup	6.97	1.78	701	3.97	10.00	11.67
N	Stuffed Baked Potato	6.97	2.03	627	10.97	14.35	12.99
-	Chinese Five Spice Chicken	96.9	2.06	322	51.95	8.46	11.07
-	Ham & Cheese Omelet	96.9	2.29	650	4.78	15.45	14.87
N	Chicken Cordon Bleu	6.94	2.15	551	23.23	11.06	13.05
-	Hawaiian Chicken	6.91	2.01	335	44.64	14.16	11.21
Ø	Turkey Ham Sandwich	6.91	1.97	650	8.20	14.35	13.12
Ø	Ranch Dressing	06.9	2.33	909	13.60	14.13	15.39

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIEC	ğ	MEAN
-	Blueberry Muffin	06.9		673	6.88	5	11.78
Ø	Hero Sandwich	ത	2.10	ന	17.09	7.08	12.01
-	Corn Bread	6.87		640	4.98	16.45	11.76
-	Italian Sausage	6.87	1.97	574	13.39	16.08	10.06
α N	Ham & Cheese Omelet	6.87	2.48	677		13.29	15.84
-	Strudel	98.9	1.72	450	39.71	5.08	8.36
-	Brownies	6.86	2.11	0	4.80	8.78	11.81
-	Oatmeal Cookies	98.9	2.11	663	4.94	13.58	12.01
<b></b> -	Swiss Steak	6.86	1.79	675	8.38	8.70	7.30
-	Baked Ham	6.85	1.95	9	1.19	4.52	7.50
0	White Bread	6.84	S	717	2.69	11.81	17.01
7	Chocolate Milk	6.84	2.26	5	3.27	6.45	16.60
<b></b>	Deviled Eggs	6.84	Ø	2		18.33	11.71
-	Pears	6.84	2.06	S	2.43	60.6	14.22
-	English Muffins	6.84	2.01	O	11.82		14.14
ય	Shish Kabob	6.83	1.99	/	26.33	5.18	9.52
-	Sweet & Sour Chicken	6.82	2.08	631	13.77	8.74	10.39
0	Pineapple Juice	6.82	2.18	<b>^</b>	6.13	14.02	14.60
-	Chicken Pot Pie	6.82	2.04	ω	11.44	16.72	10.81
-	Chicken Teriyaki	6.81	1.93	/	25.43	16.82	9.56
-	Tostados		2.11	479	27.21	14.02	10.25
7	Baked Chicken	6.81	2.10	711	3.56	11.71	12.76
0	Teriyaki Beef	6.79	2.27	585	22.39	7.91	11.56
7	Seafood Salad Sandwich	6.78	2.36	397	37.75	14.98	13.29
8	Egg Rolls	6.78	2.31	608	15.23	12.30	12.22
8	Chewy Granola Bar	6.77	2.12	650	11.94	10.57	14.32
0	Fettuccini Alfredo	۲.	2.07	415	48.46	2.07	7.01
-	Baked Stuffed Pork Chops	97.9	2.06	587	18.54	9.38	9.37
-	Steamed White Rice	92.9	2.09	-		7.97	13.23
-	Applesauce	6.75	2.24	649	5.27	15.05	11.56

					%	3 %	FRECI IENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIED	ğ	MEAN
<del></del>	Chicken Oriental	6.74	2.06	$\infty$	29.57	11.44	10.37
<b>,</b>	Whole Milk (3.2% Fat)	6.74	4.	627	8.85	14.13	16.71
Ø	Breakfast Sandwich	6.74	2.15	547	20.70	14.06	12.94
-	Sherbet	6.72	_	ဖ	2.0	6.55	
-	Szechuan Chicken	6.72	2.14	252	53.56	15.53	8.88
-	Chili Dog	6.71	2.21	4	4.17	16.76	10.96
<del>-</del> -	Popcorn	6.71	0	S	1.55	5.52	8.25
N	Enchiladas	6.70	2.33	က	16.56	7.58	11.73
7	Cantaloupe	6.70	ø	S	7.49	5.89	13.73
N	Strawberry Chiffon Pie	/	2.20	S	44.23	16.82	11.35
N	Beef Stick	69.9	1.99	461	31.00	14.10	11.66
-	Capfish	69.9	10	559	17.93	13.46	10.38
2	Salisbury Steak	6.68	2.13		5.04		11.49
-	Fettuccini Alfredo	6.68	$\circ$	405	47.87	4.	5.88
7	Pancakes	6.67	2.11		1.30	7.40	13.65
7	Bacon	6.67	က	9	1.58	7.19	14.91
N	Spanish Rice	99.9	2.22	672	11.24	8.70	12.11
0	Bratwurst	6.66	Τ.		32.52	13.46	11.54
N	Devils Food Cake	99.9	Τ.	614	12.25	14.62	11.44
-	Parsley Seasoned Potatoes	6.66	2.07	438	30.00	16.24	9.70
Ø	Eggs to Order	99.9	2.23	697	5.60	11.28	17.14
7	Stuffed Shells	6.65	2.31	$\alpha$	51.83	9.34	11.44
7	Bagels	6.65	Ġ	631	15.45	9.36	13.26
2	Honey Glazed Rock Cornish Hen	6.64	2.05	466	27.46	17.05	10.77
-	Stir-Fried Vegetables	6.64	2.09	9	12.25	5.97	7.87
-	Lemon Meringue Pie	6.64	2.30	282	16.19	10.46	•
-	Tandoori Chicken	6.63	2.12	7	70.36	8.13	12.06
0	Breaded & Fried Fish Fillet	6.62	2.41	0	09.9	ധ	12.67
0	Tortilla Chips	6.61	2.18		6.21	8.48	11.51
Ø	Baked Ham	6.61	2.13	796	1.45	3.68	9.10

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIEC	9	MEAN
7	Shrimp Jambalaya	6.61	2.55		45.79	15.24	14.09
2	Ravioli	6.60	2.20	735	4.59	7.83	10.05
-	Fried Onion Rings	6.59	2.22	617	10.26	13.91	10.57
8	Sloppy Joe Sandwich	6.59	2.24	206	4.14	11.71	11.18
-		6.58	2.18	513	30.00	6.97	8.92
_	Chili Con Carne	6.57	2.22	556	20.07	11.69	9.41
-	Ginger Pot Roast	6.57	2.05	374	38.78	15.26	9.27
-	Pork Sausage Links	6.57	2.21	622	8.23	15.36	12.07
_	Baked Fish	6.56	2.29	667	8.49	9.57	10.68
_	Beef Stick	ı,	2.02	445	31.91	13.49	10.55
8	Soup-Salad Combo	3	2.06	525	26.15	11.25	13.47
0	Boston Cream Pie	6.52	2.09	402	36.10	16.01	11.54
-	Broccoli	6.52	2.60	579	12.35	16.60	12.49
Ø	Cherry Pie	6.52	2.44	697	6.55	10.37	11.52
0	Salmon Fillet	6.52	2.59	583	21.19	9.36	10.84
-	Cajun Blackened Fish	6.49	2.43	302	57.25	5.34	8.52
8	Peanut Butter Cookies	6.49	2.39	709	4.94	10.59	13.37
0	Chocolate Pudding	6.48	2.53	720	4.39	ω	11.89
Ø	Brown Rice	6.47	2.17	533	18.13	18.34	11.77
8	Curried Chicken	6.47	2.37	545	25.70	9.39	11.41
Ø	Herb Baked Fish	6.46	2.26	403	37.30	14.67	11.23
-	Frankfurters	6.45	1.96	687	7.07	8.58	10.02
Ø	Soup-Sandwich Combo	6.44	2.12	591	18.57	10.94	12.22
8	Broccoli	6.44	2.61	685	7.30	11.12	12.83
-	Fishwich	6.43	2.09	530	23.92	10.97	8.26
-	Chicken Salad Sandwich	6.43	2.12	643	10.50	10.59	9.61
7	Meatball Submarine Sandwich	6.43	2.30	616	16.53	10.06	11.67
<b></b> -	Pasta Salad	6.43	2.13	539	22.41	11.40	9.54
-	Broccoli	6.42	2.64	636	11.05	10.51	11.91
-	Mexican Corn	6.41	2.34	349	38.32	18.85	8.31

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIEC	S	MEAN
-	Dirty Rice	6.40	2.33	305	50.19	12.32	10.18
Ø		6.40	2.64	649	9.40	13.25	13.06
Ø	Whole Milk (3.2% Fat)	6.40	2.52	673	6.78	12.98	15.53
Ø	Ē	6.39	2.41	751	3.01	7.47	11.40
- -	Savory Bread Stuffing	6.39	2.11	441	39.67	6.14	7.30
-	Granola Cereal	6.39	2.26	494	29.56	9.76	11.46
-	Granola Bar	6.39	2.33	539	14.68	19.11	10.73
Ø	Vegetable Soup	6.38	2.30		7.	8.98	12.14
_	Blueberry Cake	6.37	2.18	572	20.38	9.38	9.87
0	Red Beans & Rice	6.37	2.63	550	23.04	11.38	12.46
	High Fiber Cereal	6.36	2.32	_	21.28	14.93	13.34
-	Tempura Battered Fish	ന	2.34	317	47.31	13.72	10.44
N	Tamales	6.36	2.46	581	CO	7.08	10.75
2	Swedish Meatballs	6.35	2.08	562	o.	12.81	10.49
Ø	Fruit Filled Cereal Bars	6.35	2.17	574	Ŋ,	6.36	12.64
_	Tuna Salad Sandwich	6.35	2.20	683	9.26	6.89	9.33
∾*		6.34	2.40	629	11.03	4	11.87
-	Broiled Fish Fillet	ന	2.26	631	15.68	68.9	8.21
0	Wild Rice	6.33	2.29	554	25.91	0	11.90
<b>-</b>	Meat Loaf	6.32	1.98	763	0.52	5.79	6.81
-	Western Omelet	6.30	2.23	611	19.81	5.14	9.56
8		ω.	Τ.	629	11.25	13.81	10.15
0	Italian Salad Dressing	6.30	Ŋ	658	11.39	10.23	12.93
-	Pretzels	6.30	Τ.	989	۲.	15.21	9.74
2	Green Beans	6.30	2.27	720	5.02	9.19	11.58
7	Brewed Coffee	6.29	6	561	18.15	15.02	19.13
8	High Fiber Cereal	6.28	2.23	574	17.91	13.65	12.93
8	Sauteed Mushrooms	6.27	2.70	614	24.45	2.40	8.87
N	Frozen Yogurt	ġ	2.69	515	24.50	14.16	12.38
<b>*</b>	Brewed Coffee	6.26	2.91	580	13.70	15.09	19.67

					%	7/0	EDEOLIENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING	MEAN
7	Cereal Bar	6.24	2.11	559	23.95	9.47	12.96
7	Instant Noodle Soup	6.23	2.24		4.	13.07	9
-	Hot Oatmeal	Ŋ	2.47	0		16.66	11.29
8	Carrot Cake	ď	2.57		Τ.	8.46	
8	Trail Mix	6.22	2.44	583	25.57	4.94	
-	Jellied Fruit Salad	6.21	2.32	5	26.96	16.80	10.29
-	Braised Beef & Noodles	6.21	2.14	531	27.74	7.10	
8	Apple Coffee Cake	6.19	2.26	458	3.8	11.68	11.65
-	Chicken Croquettes	6.19	2.25	211	55.21	18.90	9.85
7	Hungarian Goulash	6.18	2.52	308	47.12	Τ.	9.69
8	Carob Coated Snack Bar	6.18	2.49	186	61.98	15.83	Ŋ
-	Caramel Candy	6.17	2.50	691	6.98	Τ.	9.38
-	Sukiyaki	6.17	2.40	303	48.08	9	8.27
N	Dark Sweet Cherries	6.16	2.42	564	25.15	7.63	
-	Paella	6.15	2.55	120	8.4	6.79	8.54
-	Ham Salad Sandwich	6.14	2.33	502	24.41	13.96	
8	Rice Pilat	6.14	2.24	410	8.0	0	11.50
7	Veal Parmesan	6.13	2.31	725	8.10	5.46	8.30
7	Yogurt w/Fruit	6.13	2.62	$\infty$	21.95	13.43	12.89
7	Vanilla Pudding	6.11	2.41	9	4.14	4.28	10.09
7	Buttered Noodles	6.11	2.08	809	14.34	13.25	9.93
0	Roast Pork	6.10	2.19	4	5.47	•	8.22
-	Ratatouille	60.9	1.93	188	73.96	2.95	5.85
7	Buttered Mixed Vegetables	6.08	2.22	607	16.10	11.56	10.83
-	Dark Rye Bread	6.07	2.54	456	26.22	17.79	11.94
2	Chicken Cacciatore	6.07	က	442	30.11	17.26	10.86
-	Spaetzle	90.9	2.59	148	64.96	16.82	9.13
7	Creole Chicken	90.9	2.18	413	34.18	16.65	11.51
N	_	0	2.40		18.09	12.47	10.25
8	Spareribs & Sauerkraut	90.9	2.65	483	28.66	13.73	10.82

					%	%	FREQUENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIED	S	MEAN
7	New England Boiled Dinner	6.05	5	249	54.83	15.55	12.66
-	Sausage Stuffing	6.04	ď	311	54.92	6.92	7.85
<b>-</b>	Refried Beans	6.04	4.	532	20.02	14.63	8.95
-	Fruit Rollup	6.02	2.32	435	34.51	12.12	10.47
7	Ginger Cookies	6.02	ω.	549	19.23	15.29	10.16
Ŋ	Fried Clams	6.01	2.78	533	30.95	5.58	8.44
N	Glazed Sweet Potatoes	6.00		585	18.42	11.86	10.78
-	African Chili	6.00		9	67.10	12.61	8.73
-	Rice Pilaf	5.98		ω	42.29	10.35	90.6
-	Chop Suey	5.97		9	5	4.51	5.45
-	El Rancho Stew	5.95	2.27	289	52.17	12.33	7.35
Ø	Moussaka	o.		109	72.84	14.17	12.12
N	Butter	5.91		770	/	5.49	16.69
-	Turnip Greens	5.90		482	31.93	8.85	7.87
-	Black Eyed Peas	5.89		534	20.97	13.42	9.91
-	Minestrone Soup	5.89		406	43.31	6.78	7.51
0	Breakfast Pizza	5.88		454	38.47	7.38	11.09
7	Kielbasa	5.86	2.73	345	51.14	7.76	10.29
7	Guacamole Salad	5.85	œ	326	48.56	12.60	10.26
7	Chili Macaroni	5.85	4	735	6.93	5.48	8.81
0	Rissole Potatoes	5.84	Ö	248	58.36	12.09	10.82
ď	Hamburger (w/Soy Protein)	5.83	2.46	700	8.59	7.97	10.54
-	Instant Orange Beverage	5.83	4	578	14.74	14.34	10.95
N	Chinese Cabbage	5.83	ø.	318	48.53	13.60	10.31
N	Tapas	5.82	ď	121	70.82	14.73	10.09
0	Raisins	5.81	2.39	661	5.73	15.47	10.71
-	Russian Dressing	5.81	2.45		50.01	15.39	9.51
-	Margarine	α	<del>-</del> .	658	5.60	13.61	14.49
8	Minestrone Soup	•	2.35		38.90	6.31	10.27
-	Sauerbraten	5.79	2.35	223	56.47	16.17	7.32

					/	/6	
Ľ.	Mari	MEAN	מ	Z	NEVER TRIEF	SINISSIM *	MEAN
2	IAITA	בבו ב		2	יאריא רוז וווירם		
8	Peas	5.79	2.56	723	4.18	9.67	9.64
-	Instant Breakfast Drink	5.78	2.28	514	28.62	8.24	12.25
<del>-</del>	Hamburger (w/Soy Protein)	5.77	2.46	099	10.36	8.58	9.71
<del>-</del>	OD.	5.76	2.42	586	13.10	14.91	8.11
-	Gingerbread	5.76	2.30	571	19.08	10.75	7.40
-	Cole Slaw	5.74	2.65	598	10.04	16.50	9.23
N	Creamed Chipped Beef	5.74	2.77	506	26.16	13.56	10.22
-	American Chop Suey	5.74	2.51	322	45.28	15.13	79.7
_	Low Fat Beef Patty	5.74	2.29	364	39.67	15.62	9.63
7	Quark	5.72	2.99	121	73.29	12.35	14.24
<del>-</del>	Corn Fritters	5.71	2.21	362	46.27	9.33	6.82
<del>-</del>	Spice Cake	5.69	2.26	556	23.51	8.21	7.79
2	Coconut Raisin Cookies	5.66	2.69	541	28.81	6.77	10.30
N	Hot (German) Potato Salad	5.66	2.63	441	39.62	7.87	9.22
-	Frijole Salad	5.66	2.34	217	63.87	9.51	7.48
7	Lentil Loaf	5.62	2.57	146	63.22	19.38	13.78
-	Waldorf Salad	5.61	2.34	252	54.02	14.99	7.35
-	Cranberry Juice	5.61	2.70	553	19.88	12.19	10.93
0	Sliced Tomato Salad	5.60	2.69	909	23.08	4.74	11.01
-	Ham, Pasta & Tomato Casserole	5.60	2.69	287	55.20	9.54	8.19
0	Yakisoba	5.60	2.50	216	61.57	12.69	11.13
Ø	Tomato Calamari	5.59	2.50	9	65.23	14.58	10.98
Ø	Stuffed Green Peppers		2.74	533	20.77	15.74	8.84
_	Cream of Mushroom Soup	5.58	2.65	448	29.52	15.53	7.70
-	Vegetarian Baked Beans	5.58	2.55	322	51.68	8.76	7.49
-	Cholesterol-Free Eggs		2.63	288	51.23	13.40	11.70
Q	Vienna Sausage	5	2.53	651	13.03	9.40	9.00
-	Tapioca Pudding	ıŞ.	2.73	438	30.92	15.35	8.20
Ŋ	Chicken Noodle Casserole	ī.	2.38	639	16.74	7.14	7.45
-	Cauliflower au Gratin	5.56	2.58	348	47.36	9.94	6.71

					%	%	FRECHENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIED	S S	MEAN
N	Low Calorie Salad Dressing	5	2.68	0	17.34	10.11	12.12
Ŋ	Fried Okra	5.52	3.00	522	30.07	7.77	10.28
Ŋ	Collard Greens	5	3.01	0	24.83	4.09	7.82
Ŋ	Rice Pudding	5.51	2.52	9	31.81	13.21	8.55
Ŋ	Cranberry Juice	5.51	2.75		18.39	13.64	0
-	Creamed Ground Beef	5.49	2.68	4	23.94	9.44	8.38
-	Feta Cheese	5.49	2.27	257	61.81	6.62	9.37
2	Scalloped Ham & Noodles	5.47	2.53		26.62	12.19	9.12
-	Creamed Chipped Beef	5.46	2.58	466	28.58	14.17	8.16
-	Peas	5.45	2.47	670	6.35	11.41	8.03
2	French Onion Soup	5.45	2.56	472	32.97	10.75	9.10
-	Potatoes Au Gratin	5.44	2.67	620	12.78	11.06	7.63
-	Cooked Cabbage	5.43	3.00	$\infty$	9.05	6.58	6.03
-	Spinach Lasagna	5.40	2.92	244	9	10.33	8.63
-	Creamed Chipped Beef	5.40	2.57	529	28.92	6.12	7.41
N	Dark Rye Bread	5.38	2.82	477	25.64	17.52	11.51
_	Beef & Corn Pie	5.36	2.26	423	40.74	7.33	4.58
N	Snow Peas	5.36	2.68	346	52.41	6.32	8.99
N	Hot Cream of Wheat	5.36	2.70	637	16.67	7.40	10.12
N	Cholesterol-Free Eggs	5.35	2.78	374	46.06	9.37	12.15
Ŋ	Low Fat Beef Patty	5.35	2.52	428	33.30	15.71	9.23
-	Rice Pudding	5.35	2.85	447	31.25	13.91	7.89
7	Grapefruit Half	5.34	2.73	663	11.11	9.84	10.72
7	Cucumber Onion Salad	5.33	2.68	516	32.21	6.27	9.62
-	Diet Milkshake	5.33	2.88	289	49.00	15.51	8.77
N	Vegetarian Chilli	5.30	7:	209	60.40	14.68	9.60
8	Buttered Carrots	5.30	2.51	608	18.83	8.74	9.44
N	Three Bean Salad	5.29	2.42		43.76	14.92	9.18
7		5.29	۲.	O	23.52	5.93	9.63
8	Cholesterol-Free Eggs	5.28	2.86	349	43.92	14.45	11.22

					%	%	EBECI IENCY
LIST	ITEM	MEAN	SD	z	NEVER TRIEC	δ	MEAN
:							
_	Cucumber Onion Salad	5.27	2.54		44.86	σ.	7.23
8	Vegetable Juice		2.83	701	10.98	5.49	9.85
8	Vegetarian Hot Dog	Ġ	2.65	186	65.71	12.14	10.87
_	7		2.71	404	33.67	16.71	7.01
-	Tuna Noodle Casserole	Ġ	2.70	/	12.59	5.13	5.02
-	Quiche Lorraine	5.20	2.47	191	68.14	8.46	5.48
2	Dried Apricots	5.20	2.86	343	48.58	10.50	10.15
-	Eggplant Parmesan	5.19	2.88	0	Θ.	14.70	8.19
0	Spirulina Miama	5.19	2.37	81	77.27	13.09	10.76
7	Hominy Grits	5.16	3.01	7	24.04	5	11.95
-	Tomato Soup		2.66	-	15.00	9.25	6.70
0	Fried Eggplant		3.03	-	48.91	13.29	8.06
-	Corned Beef	5.14	2.60	O	15.92	11.04	6.44
2	Carrot & Raisin Salad	5.13	2.74	326	43.58	17.54	9.33
-	Cholesterol-Free Eggs	5.12	2.73	4	49.48	Τ.	11.36
-	Blue Cheese Salad Dressing	5.10	2.78		O	8.45	9.82
0	Cottage Cheese	0	2.87	φ	5	11.29	8.94
-	Lyonnaise Carrots	5.09	2.46	184	7.2	10.22	6.19
N	Instant Coffee	5.06	3.02	604	Т.	10.80	13.17
-	Spirulina Miama	0	2.93	71	0.	14.19	7.25
8	Tuna Noodle Casserole	5.02	2.76		11.29	2.52	6.61
0	Sauerkraut	5.00	2.89	487	ത	18.07	7.64
7	Carrots Amandine	4.99	2.61		62.77	11.29	10.48
-	Sardines	4.98	2.84	/	26.51	15.39	6.57
0	Chitterlings	4.98	3.26	$\alpha$	50.44	10.33	9.23
N	Skim Milk	4.94	2.86		19.17	11.86	13.05
7	Liverwurst Sandwich	4.94	ω	321	46.81	14.94	7.90
<b></b>	Asparagus		3.02	9	33.46	0	œ
-	Spinach	4.77	တ	620	16.39	7.52	6.64
-	Tofu Rice Burgers	4.72	3.01	126	69.86	14.69	8.08

ITEM MEAN SI  and 4.64 2.8  4.64 3.0  4.64 3.0  4.64 3.0  4.63 2.0  4.61 2.0  4.45 2.0  4.45 2.0  4.40 2.0  5.0  5.0  5.0  6.0  Figure A.27 2.0  Figure A.27 2.						%	%	FREQUENCY
4.64 4.64 4.63 4.58 4.45 4.40 4.40 4.39 4.27 4.26 4.26 4.26 9.98 9.98 9.92 9.92 9.93 9.93 9.93 9.93	IST	ITEM	MEAN		z	<b>NEVER TRIEC</b>	MISSING	MEAN
4.64 4.64 4.63 4.61 4.61 4.45 4.40 4.40 4.39 4.27 4.26 4.27 4.26 9.39 9.92 9.92 9.92 9.93 9.92 9.93								
4.64 4.63 4.61 4.61 4.45 4.45 4.40 4.40 4.27 4.27 4.26 5.00 6.00 6.00 6.00 6.00 6.00 6.00 6.0	_	Spinach Salad		2.81	383	44.13	8.81	5.64
4.63 4.61 4.58 4.45 4.45 4.40 4.40 4.27 4.27 4.29 9.69 9.69 9.63 9.63 9.63 9.63 9.63 9.6	_	Pigs Feet	9	0		39.32	13.07	6.95
4.61 4.58 4.45 4.45 4.40 4.40 4.38 4.27 4.27 4.27 4.27 4.29 9.29 9.39 9.69	N	Cloud Ears	9	9		75.48	11.51	10.96
4.58 4.45 4.45 4.41 4.40 4.39 4.38 4.27 4.27 4.27 4.19 6.10 9.98 9.92 9.92 9.93	-	Brussels Sprouts		7.		33.14	10.61	7.05
4.50 4.45 4.42 4.40 4.38 4.38 4.27 4.27 4.26 9.00 9.00 9.00 9.00 9.00 9.00 9.00 9.0	2	Zucchini Squash	3	œ	477	32.78	10.35	7.73
4.45 4.42 4.41 4.40 4.38 4.27 4.27 4.26 9.00 9.00 9.00 9.00 9.00 9.00 9.00 9.0	<b>*</b>		4.50	0.	233	55.98	15.45	7.24
4.42 4.40 4.40 4.38 4.38 4.27 4.27 4.19 ions 4.10 3.98 96 3.98 3.69	7	Plain Yogurt	4.	æ	445	32.68	14.34	8.75
4.41 4.40 4.39 4.38 4.27 4.27 4.27 4.10 600s 6.3.98 86 3.92 3.69 3.54	_	_	4	7.	426	33.90	13.80	6.38
4.40 4.39 4.38 4.27 4.27 4.26 4.10 3.98 96 3.92 3.69 3.54	-	Lima Beans	4.	ω	က	14.85	7.24	6.14
4.39 4.38 4.38 4.27 4.27 4.10 ions 4.10 3.98 99 3.92 3.69	2	Diet Cola	4.40	0	575	14.11	17.33	9.58
4.38 4.38 4.27 4.27 4.19 ions 4.10 3.98 96 3.92 3.69	N		4.39	O	က	47.83	12.10	6.95
4.38 4.27 4.27 4.26 4.19 60 3.98 86 3.92 3.69 3.69	<del></del>	Peanut Soup		2.86	97	76.48	11.57	6.92
4.27 4.27 4.26 4.19 ions 4.10 3.98 99 3.92 3.69	<del></del>	Tomato Juice	4.38	2.76	S	16.36	7.54	6.97
4.27 4.26 4.19 ions 4.10 3.98 99 3.92 3.82 3.69 3.54	-	Mincemeat Pie	4.27	2.71	297	55.11	8.42	4.36
4.26 4.19 ions 4.10 3.98 96 3.92 3.69 3.54	۵	Chicken Ala King	4.27	2.87	631	14.11	10.66	6.55
4.19 3.98 3.92 3.82 3.69	<b>-</b>	Corned Beef Hash	4.26	2.59	099	12.16	6.75	4.58
. 4.10 3.0 3.98 2.6 3.92 2.8 3.82 2.8 3.69 2.7 3.54 2.5	-	Green Pea Soup	٣.	2.73	0	40.92	9.63	5.03
3.98 2.6 ad Coffee 3.92 2.8 nes 3.69 2.7 3.69 2.7 3.54 2.5	N	Braised Liver w/Onions	Τ.	0	629	17.45	4.03	4.07
ad Coffee 3.92 2.8 nes 3.82 2.8 3.69 2.7 3.54 2.5	<b>.</b>	Dried Dates	3.98	စ	413	41.70	7.62	3.57
3.82 2.8 3.69 2.7 3.54 2.5	N		σ.	ω	586	24.56	5.59	7.98
3.69 2.7 3.54 2.5	23	$\overline{}$	æ	œ	253	56.90	13.00	6.42
3.54 2.5	2	Buttermilk	9	7.	416	36.32	14.13	5.45
	-	Buttermilk	5.	ı.	475	31.98	9.72	4.39
nes 2.94 2.5	<b></b> -	Stewed Prunes	2.94	2.57	235	60.48	10.61	3.41

Appendix F. Ranked Frequency Ratings, All Foods

LIST	ST ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT
2	Orange Juice	2.5	10.43	œ	2.60	
-	Orange Juice	20.99	11.25	4	2.95	30.51
•	Bottled Spring Water	20.39	12.04	452	14.29	30.17
-	Cola Beverage	19.84	11.69	7	•	26.56
<del></del>	Brewed Coffee	Θ.	13.26	4	7.	31.54
2	lced Tea	19.65	11.59	/	4.37	27.14
7	Brewed Coffee	Τ.	12.35	ന	18.15	29.74
7	Bananas	18.97	10.72	2	3.22	30.42
-	Oranges	Τ.	11.22	ത	რ.	25.36
•	Cold Cereals (Assorted)	0.	11.44	O	3.70	3.4
7	Tossed Green Salad		10.44	615	4.	22.28
-	Whole Wheat Bread	۲.		/	က	6.4
N	Chef's Salad w/Meat & Cheese	17.66	10.78	ω	7.32	2.7
-	Hot Chocolate	9.	11.21	9	5.	8.0
Ø	Apples	9	11.26	$\sim$	2.20	29.66
-	Tossed Green Salad	17.55	10.99	2	-	4.2
<del>-</del>	Grapes	ı.	11.27	9	2.89	7.9
	Apple Juice	17.24	Τ.	0	3.10	તં
7	Eggs to Order	17.14	10.95	4	5.60	8.9
Ø	Milk Shake	17.04		9	4.16	28.77
7	White Bread		11.05	ω	2.69	27.26
	Whole Milk (3.2% Fat)	16.71	12.42	469	8.85	33.53
-	Apples	16.70	11.29	2	2.91	29.44
N	Butter	16.69	11.89	629	2.78	22.26
N	Chocolate Milk	16.60	11.04	$\alpha$	3.27	22.26
0	Soft Serve Ice Cream	16.56	11.02	9	0	29.58
2	Peaches	16.39	10.60	591	1.97	27.64
-	Lemonade	16.37	10.94	0	æ	33.57
7		16.35	10.94	4		31.74
7	Hamburger (100% Ground Beef)	16.26	10.44	546	1.83	33.14

					F. 100010	F. 47.0
LIST	ITEM	MEAN	SD	z	PERCENI NEVER TRIED	MISSING
7	French Toast	16.04	10.58	503	3.92	36.15
-	Fruit Punch	15.85	10.86	540	2.89	30.78
7	Ham & Cheese Omelet	15.84	10.77	527	6.02	31.23
α	Breaded/Fried Shrimp	15.61	10.91	583	5.05	25.52
α	Whole Milk (3.2% Fat)	15.53	12.04	517	6.78	31.57
8		15.39	11.06	457	13.60	31.88
-	French Fried Potatoes	15.30	10.39	564	2.06	28.70
2	Whole Kernel Corn	15.17	10.31	571	4.65	27.33
7	Bacon	14.91	11.53	634	1.58	22.86
-	Ham & Cheese Omelet	14.87	11.81	507	4.78	33.00
-	Chocolate Chip Cookies	14.83	10.76	520	3.88	32.27
-	Fruit Cocktail	14.82	10.77	580	2.91	25.82
-	Pineapple	14.73	10.93	536	3.25	30.96
0	Pineapple Juice	14.60	10.78	519	6.13	32.04
7	Mashed Potatoes	14.57	9.11	537	3.20	32.78
2	Apple Pie	14.55	10.47	207	3.89	35.70
7	French Fried Potatoes	14.49	9.84	630	2.11	22.81
•	Margarine	14.49	11.39	542	5.60	27.86
7	Chewy Granola Bar	14.32	10.81	521	11.94	26.03
<b>*</b>	Hashed Brown Potatoes	14.24	10.77	496	5.53	33.57
7	Quark	14.24	12.86	73	73.29	17.97
-	Pears	14.22	11.02	586	2.43	25.65
-	English Muffins	14.14	10.87	470	11.82	0.4
-	Breaded/Fried Shrimp	14.13	10.94	570	5.95	4.0
7	Shrimp Jambalaya	14.09	10.87	242	45.79	25.33
7	Cheesecake	14.07	11.64	490	9.79	1.8
2	Doughnuts	14.05	10.66	523	3.18	34.45
7	Tacos	14.02	06.6	515	4.17	34.51
7	Spiral French Fries	13.94	10.07	586	10.93	19.25
2	Lasagna	13.91	10.45	558	2.37	31.13

LIST	ITEM	MEAN	SD	Z	PERCENT NEVER TRIED	PERCENT MISSING
2	Lentii Loaf	13.78	11.40		Ŋ	26.38
8	Cantaloupe	7.	11.26	9	7.49	24.71
0	Jaegerschnitzel	۲.		281	45.81	0.7
N	Pancakes	9	10.26	Ø	1.30	24.61
0	Soup-Salad Combo	13.47	10.55	_	26.15	4.7
0	Peanut Butter Cookies	13.37		2	4.94	8.6
-	Garlic Bread	13.35	0.	508	4.78	2.8
-	High Fiber Cereal	13.34	5.	σ	21.28	0.1
N	Mesquite Grilled Meats	က		က	က	5.8
7	Seafood Salad Sandwich	13.29	0	_	7.	4.5
7	Bagels	α.	9.85	ω	15.45	26.67
-	Steamed White Rice	13.23	Ο.	ω	7.	4.0
-	Baked Potato	ď	က	0	4.70	4.6
-	Watermelon	13.19	11.07	508	0	9
0	Instant Coffee	13.17	9	4	17.17	9.5
N	Chicken Nuggets	13.13	œ	$\infty$	ന	37.35
2	Turkey Ham Sandwich	13.12	9	α	8.20	3.7
-		13.11	9	_	Τ.	ω. ω
7	Turkey Breast Sandwich	13.11	9.57	0	7.	4.4
<del>-</del>	Lasagna	13.10			2.43	30.12
8	Broccoli	13.06	11.00	0	9.40	0.
8	Skim Milk	13.05	12.41	4	19.17	8.2
7	Chicken Cordon Bleu	13.05	10.67	427	23.23	5.8
N	Roast Beef	13.00	9.71	0	3.02	6.7
8	Stuffed Baked Potato	12.99	10.10		10.97	33.23
0	Cereal Bar	12.96	10.40		3.9	3.8
7	Breakfast Sandwich	12.94	æ	N	20.70	29.15
-	Fajitas	0	10.30	349	5.5	1.5
_	Apple Pie	12.93	10.74		4.52	8.4
N	High Fiber Cereal	12.93	9.86	425	17.91	31.42

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
7	Italian Salad Dressing	12.93	11.64	N	11.39	26.13
-	Cinnamon Sweet Rolls	12.89	9.87	506	5.34	32.57
7	Yogurt w/Fruit	12.89	10.94	463	21.95	26.51
2	Broccoli	12.83	10.63	543	7.30	28.03
7	Cheese Steak Sandwich	12.82	9.70	535	13.26	22.96
<b>~</b> -	Strawberry Shortcake	12.79	11.20	486	5.31	34.95
-	BLT Sandwich	12.78	10.52	480	6.59	34.44
2	Baked Chicken	7	98.6		S	29.65
-	Buffalo Wings	12.75	11.08	399	23.48	27.56
2	Breaded & Fried Fish Fillet	12.67	10.22	4	6.60	28.40
2	New England Boiled Dinner	12.66	11.84	188	54.83	22.74
7	Grilled Steak	12.66	9.73	625	2.94	22.57
7	Fruit Filled Cereal Bars	12.64	10.04	457	25.23	20.27
<del></del>	Broccoli	12.49	10.43	450	12.35	32.43
7	Red Beans & Rice	12.46	10.62	414	23.04	27.64
-	Gyros	12.41	11.00	299	35.91	27.33
2	Potato Skins	12.39	9.75	379	22.59	32.19
<b>~~</b>	Grilled Ham & Cheese Sandwich	12.38	9,52	577	1.99	27.13
7	Frozen Yogurt	12.38	10.78	413	24.50	26.24
γ	Grilled Chicken Breast	12.33	9.53	523	7.69	28.13
-	Instant Breakfast Drink	12.25	11.49	394	CO	2.9
7	Egg Rolls		10.33	455	15.23	30.55
2	Soup-Sandwich Combo	ď	10.01	438	18.57	29.19
<b></b> -	Hero Sandwich		9.87	478	15.69	25.66
-	Hot Fudge Sundae	12.17	10.89	496	7.06	32.08
0	Cholesterol-Free Eggs	12.15	11.25	285	46.06	20.01
7	Vegetable Soup	12.14	10.39	554	5.73	28.23
8	Moussaka	12.12	12.68	97	72.84	18.14
7	Low Calorie Salad Dressing	12.12	11.12	495	17.34	23.72
N	Spanish Rice	12.11	10.21	521	11.24	26.61

LIST	ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT MISSING
7	Cranberry Juice		11.25		18.39	31.98
	Pork Sausage Links	0		7	8.23	33.68
<del>-</del>	Tandoori Chicken	12.06	11.58	145	70.36	11.86
Ø	Hero Sandwich	0	9.96	482	17.09	5.
<del></del>	Oatmeal Cookies	12.01	•		4.94	
CV	Hominy Grits		12.12	9	24.04	0.8
-	Dark Rye Bread	11.94	•	~~	26.22	5.6
-	Broccoli		10.16	O	0.	7.
7	Wild Rice	11.90	9.64	4	25.91	1.2
0	Chocolate Pudding	11.89	•	5	4.39	0.1
8	Pork Sausage Links	11.87	10.46	525	11.03	26.43
-	Spaghetti w/Meat Sauce	11.84		9	1.41	8.6
2	Hot Turkey Sandwich w/Gravy	11.83	9.40	4	7.40	8.2
-	Brownies	11.81		4	4.80	27.87
	Blueberry Muffin	11.78		529	6.88	8.1
0	Brown Rice	11.77	9.65	ω	18.13	5.7
-	Corn Bread	11.76		0		
N	Enchiladas .	11.73		494	16.56	4.6
-	Fried Rice	11.72	•	ന	•	6.8
-	Deviled Eggs	11.71	•	ന	Τ.	
•	Cholesterol-Free Eggs	11.70	11.99	193	Q	25.06
-	Chicken Noodle Soup	11.67		5	3.97	
0	Meatball Submarine Sandwich	11.67	9.56	456	16.53	29.19
N	Beef Stick	11.66		S	31.00	30.29
7	Instant Noodle Soup	11.65	9.89	462	14.01	30.89
7	Pizza	11.65	9.48	Ŋ	1.00	21.57
0	Apple Coffee Cake		9.94		33.80	24.30
7	Green Beans	11.58	Т.	4	5.02	30.29
N	Teriyaki Beef		ĸ.		22.39	22.56
-	Applesauce	11.56	9.93		5.27	

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
7	Bratwurst	11.54	10.03	S	32.52	
-	Pepper Steak	11.54	9.81	Ø	8.40	26.84
8	Boston Cream Pie	11.54	9.91	274	36.10	31.28
0	Cherry Pie	11.52	9.94	N	6.55	31.21
2	Creole Chicken	11.51	9.90	0	34.18	29.80
7	Dark Rye Bread	11.51	11.12	ന	25.64	34.50
7	Tortilla Chips	11.51	9.69	547	6.21	28.59
7	Steak Ranchero	11.51	10.40	399	34.30	18.11
7	Rice Pilaf	11.50	10.15	325	38.09	3.1
7	Salisbury Steak	11.49	9.49	542	5.04	30.38
-	Granola Cereal	11.46	10.07	382	29.56	3,5
-	Nachos	11.44	9.73	538	9.	30.27
8	Stuffed Shells	11.44	10.24	233	51.83	ö
7	Devils Food Cake	11.44	10.15	451	12.25	33.96
2	Curried Chicken	11.41	ω	420	25.70	4.
7	Peanut Butter & Jelly Sandwich	11.40	9.81	601	3.01	ις.
<b></b> -	Burritos	11.37	9.30	465	8.85	4.0
-	Cholesterol-Free Eggs	11.36	11.50	232	49.48	22.07
7	Strawberry Chiffon Pie	11.35	ο.	244	44.23	26.74
_	Hot Oatmeal	11.29	10.29	443	8.60	36.98
7	Lasagna	11.24	8.94	999	1.45	19.14
7	Herb Baked Fish	11.23	9.79	303	37.30	26.58
8	Cholesterol-Free Eggs	11.22	10.81	257	43.92	
_	Hawaijan Chicken	11.21	10.02	233	44.64	26.76
2	Sloppy Joe Sandwich	11.18	9.64	547	4.14	30.68
α	Yakisoba	11.13	11.13	153	61.57	
8	Breakfast Pizza	11.09	10.10	329	38.47	22.36
-	Chinese Five Spice Chicken	11.07	9.80	245	51.95	18.02
7	Sliced Tomato Salad	11.01	11.00	477	23.08	0
8	Tomato Calamari	10.98	10.40	137	65.23	18.40

LIST	LEW	MFAN	CS	Z	PERCENT NEVER TRIED	PERCENT
2	Cloud Ears	10.96	10.19	99	75.48	16.72
-	Chili Dog	10.96	9.75	494	4.17	35.14
-	Instant Orange Beverage	10.95	11.56	420	14.74	33.66
-	Cranberry Juice	10.93	11.32	395	19.88	31.64
Q	Vegetarian Hot Dog	10.87	10.99	141	65.71	17.54
Ø	Chicken Cacciatore	10.86	10.24	344	30.11	
Ø	Salmon Fillet	10.84	10.37	446	21.19	
N	Buttered Mixed Vegetables	10.83	9.37	443	16.10	31.09
7	Rissole Potatoes	10.82	9.83	186	58.36	19.44
α	Spareribs & Sauerkraut	10.82	10.69	367	28.66	27.59
<del></del>	Chicken Pot Pie	œ	10.37	441	11.44	34.44
N	Glazed Sweet Potatoes	10.78	10.71	449	18.42	28.06
7	Honey Glazed Rock Cornish Hen	10.77	10.02	344	27.46	31.56
7	Mozzarella Sticks	10.77	9.22	527	ဖ	
2	Spirulina Miama	10.76	10.04	48	77.27	16.97
7	Tamales	10.75		443	23.68	23.58
<b>-</b>	Granola Bar	10.73	9.93	368	, 14.68	40.09
.cu	Grapefruit Half	10.72	11.27	521	11.11	26.80
7	Raisins	10.71	99.6	516	5.73	32.84
<del>-</del>	Baked Fish	10.68	9.78	506	8.49	29.31
_	Fried Onion Rings	10.57	10.06	452	10.26	
•	Beef Stick	10.55	10.03	334	31.91	27.10
Ŋ	Hamburger (w/Soy Protein)	10.54	9.	550	8.59	
-	Ham Salad Sandwich	10.53	ო.	ω	24.41	
α	Swedish Meatballs	10.49	9.24	426	20.26	29.02
7	Carrots Amandine	10.48	11.00		ď.	
<b>,-</b> -	Fruit Rollup	10.47	10.64	$\alpha$		25.32
-	Tempura Battered Fish	10.44	11.08	218	47.31	25.94
-	Taco Salad	10.43	ġ	4	•	23.84
-	Fried Chicken	10.40	9.80	608	0.64	24.76

TSI	NET TEM	MEAN	o o	z	PERCENT NEVER TRIED	PERCENT
	A A 4 m a			2	Ĵ∥	
-	Sweet & Sour Chicken	10.39	Ο.	6	13.77	25.14
	Catfish	10.38	9.87	0		33.13
-	Chicken Oriental	10.37	9.48	387	29.57	22.91
7	Trail Mix	10.36	10.34	က		22.23
7	Carrot Cake	10.31	9.76	$\infty$	15.13	27.39
7	Chinese Cabbage	10.31	96.6	4	48.53	22.71
7	Coconut Raisin Cookies	10.30	9.87	S	28.81	20.86
-	Jellied Fruit Salad	10.29	10.27	4	ο.	30.82
7	Kielbasa	10.29	10.50	7	<u></u>	6.0
7	Carob Coated Snack Bar	10.28	9.43	S	1.9	7.
0	Fried Okra	10.28	10.51	379	30.07	4.
7	Minestrone Soup	10.27	10.19	4	38.90	Ö.
Ω	Guacamole Salad	10.26	10.70	ന	ı.	3.3
	Tostados		9.20	5	ď	о О
7	Glazed Ham Loaf	10.25	9.47	9	8.0	26.52
7	Creamed Chipped Beef	10.22	10.00	7	₹.	9.2
-	Dirty Rice	10.18	9.86	S	0.1	ς. ω
N	Ginger Cookies	10.16	9.54	•	19.23	9.
7	White Cake	10.15	9.27	/	11.25	31.81
8	Dried Apricots	10.15	10.98	262		20.16
2	Hot Cream of Wheat	10.12	10.74	6	16.67	24.49
7	Vanilla Pudding	10.09	9.44	0	4.14	23.53
7	Tapas	10.09	8.44	7.5	70.82	20.31
-	Italian Sausage	10.06	9.66	0	13.39	37.25
7	Ravioli	10.05	9.52	593	ı.	24.76
-	Frankfurters	0	9.11	539	7.07	26.79
7	Dark Sweet Cherries	9.95	9.68		Τ.	
2	Buttered Noodles		8.90	S	14.34	31.04
-	Black Eyed Peas	ο.	4	O	0	
-	Barbecued Spareribs	9.90	9.67	604	2.37	23.41

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	z	NEVER TRIED	MISSING
•	Lasagna			က	1.09	21.08
-	Blueberry Cake	9.87	9.33			25.82
-	Chicken Croquettes	9.85	10.70	153	55.21	26.00
Ø	Vegetable Juice	ω	10.81	S	10.98	
<del></del>	Calzone		8.71	-	56.25	17.33
-	Blue Cheese Salad Dressing		σ.	7	29.21	24.33
-	Pretzels	7	9	481	6.70	4.2
-	Hamburger (w/Soy Protein)	9.71	9.36	0	10.36	27.77
-	Parsley Seasoned Potatoes	7	œ	0		3.2
CΙ	Hungarian Goulash	ဖ	9.86	_	47.12	6.9
0	Cucumber Onion Salad	9.65	•	392	32.21	21.02
8	Peas	9.64	8.72	Ø	4.18	3.0
₩.	Low Fat Beef Patty	•	4	4	39.67	0.0
2	Creamed Chipped Beef	9.63	3	/	က	9.4
-	Chicken Salad Sandwich	9.61	7.	489	0.5	
7	Vegetarian Chili	9.60	11.50	135	60.40	23.56
7	Diet Cola	9.58	Ö.	417	14.11	
-	Chicken Teriyaki	9.56	9.09	347	25.43	32.01
•	Western Omelet	•	ω.		19.81	22.95
-	Pasta Salad	9.54	Τ.	434	22.41	
N	Shish Kabob	9.52	œ	449	26.33	20.20
-	Russian Dressing	9.51	۲.	0	50.01	25.38
ત	Buttered Carrots	9.44	ന	458	18.83	26.59
<del></del>	Chili Con Carne	9.41	9.21	413	20.07	29.21
-	Caramel Candy	9.38	10.24	526	6.98	œ.
-	Feta Cheese		11.63		61.81	9.
-	Baked Stuffed Pork Chops	9.37	8.99	449	18.54	26.27
•	Tuna Salad Sandwich	9.33	ď	4	9.26	
Ø	Carrot & Raisin Salad	9.33	10.61	216	43.58	30.67
-	Ginger Pot Roast	9.27	9.14		38.78	30.02

LIST	LIST ITEM	MEAN	MEAN SD N N	z	PERCENT NEVER TRIED	PERCENT MISSING
-	Sherbet	9.25	9.71	ന	12.07	~
7	Chitterlings	9.23	12.04	S	50.44	19.47
0	Low Fat Beef Patty	9.23	10.08	0	33.30	32.06
-	Cole Slaw	9.23	8.67	$\overline{}$	0	39.60
2	Hot (German) Potato Salad	9.22	9.78	324	39.62	21.80
8	Three Bean Salad	9.18	9.93	253	43.76	26.13
-	Spaetzle	9.13	10.03	83	64.96	24.86
7	Scalloped Ham & Noodles	9.12	9.37	/	26.62	28.60
2	Baked Ham	9.10	8.62	က	1.45	22.48
Ŋ	French Onion Soup	9.10	9.66	မ	32.97	24.11
-	Lemon Meringue Pie	9.07	9.62	442	16.19	29.57
-	Rice Pilaf	90.6	8.41	α	42.29	2.7
7	Vienna Sausage	9.00	10.02	α	13.03	9.1
7	Snow Peas	8.99	9.88	မ	52.41	6.5
	Refried Beans	8.95	8.96	0	20.02	0.0
2	Cottage Cheese	8.94	10.20	$\alpha$	21.57	7.4
-	Grilled Lamb Chops	8.92	9.71	တ	30.00	22.02
-	Szechuan Chicken	8.88	9.28	တ		2.2
2	Sauteed Mushrooms	8.87	9.19	0	24.45	15.99
7	Stuffed Green Peppers	8.84	9.86	œ	20.77	3.0
7	Chili Macaroni	8.81	9.50	~	6.93	4.0
<b></b> -	Diet Milkshake	8.77	10.13	_	49.00	o
-	Roast Turkey	8.76	8.98	ω	1.43	6.4
7	Plain Yogurt	8.75	10.66	$\alpha$	32.68	 
-	African Chili	8.73	10.59	0	7.1	20.27
•	Spinach Lasagna	8.63		178	59.67	8.4
7	Rice Pudding	8.55	9.24	ന	31.81	27.88
-	Paella	8.54		06	4.	10.50
	Cajun Blackened Fish	IJ		217	57.25	16.12
N	Fried Clams	8.44		0		20.59

LIST	ITEM	MEAN	SD	z	PERCENT NEVER TRIED	PERCENT
-	Creamed Ground Beef	8.38	0.	₩-		24.55
-	Strudel	8.36	8.82		39.71	_
-	Mexican Corn	8.31		$^{\circ}$		33.67
0	Veal Parmesan	8.30	9		8.10	5.8
-	Sukiyaki	8.27	8.20	223		4.
-	Fishwich	8.26			23.92	5.5
<b></b> -	Popcorn	8.25			3	23.48
8	Roast Pork	8.22		0	4	24.10
<del></del>	Broiled Fish Fillet	8.21		ဖ	9.	6.9
-	Tapioca Pudding	8.20		S	o.	9.0
-	Eggplant Parmesan	8.19		145		2.2
-	-	8.19		0	5	0.2
<del></del>	Creamed Chipped Beef	8.16		4	œ.	9.7
-	Unsalted Peanuts	8.11		9	13.10	o.
-	Tofu Rice Burgers	8.08		68	69.86	1.7
0	Fried Eggplant	8.06		_	48.91	9.9
•	Peas	8.03		0	6.35	2.1
8	Decaffeinated Coffee	7.98		4	24.56	2.4
Ø	Liverwurst Sandwich	7.90		$^{\circ}$	ø.	
<b></b>	Rice Pudding	7.89	9.16	325	1.2	28.84
-	Stir-Fried Vegetables	7.87		က	12.25	
-	Turnip Greens	7.87		2	1.9	4.5
·	Sausage Stuffing	7.85		-	4.9	
N	Collard Greens	7.82		441	24.83	22.64
-	Spice Cake	۲.		422	23.51	
2	Zucchini Squash	7.73			32.78	23.94
-	Cream of Mushroom Soup	7.70	9.03	324	9.5	30.70
-	American Chop Suey	7.67	8.40		45.28	5.
2	Sauerkraut	7.64	9.76		Θ.	6.2
<b>-</b>	Potatoes Au Gratin	7.63	8.45	469	12.78	29.67

LIST	ITEM	MEAN	SD	z	PERCEN I NEVER TRIED	PERCENI
<del></del>	Shish Kabob	7.53	N	8	33.48	19.39
-	Minestrone Soup	7.51	8.00		43.31	19.89
-	Baked Ham	7.50	8.20	-	1.19	23.95
-	Vegetarian Baked Beans	7.49	8.06	247	51.68	17.97
-	Frijole Salad	7.48	8.69	167	63.87	15.63
8	Chicken Noodle Casserole	7.45	8.85	482	16.74	25.76
_		7.41	8.71	402	28.92	21.75
-	Gingerbread	7.40	8.07	428	19.08	8.3
_	El Rancho Stew	7.35	7.95	210	52.17	22.05
-	Waldorf Salad	7.35	8.15	182	54.02	23.69
-	Sauerbraten	7.32	8.15	161	4	23.77
-	Savory Bread Stuffing	7.30	7.63	359	39.67	16.28
-	Swiss Steak	7.30	7.83	535	8.38	5.9
-	Spirulina Miama	7.25	7.66	28	77.08	9.5
_	Harvard Beets	7.24	10.11	150	55.98	5.6
-	Cucumber Onion Salad	7.23	8.37	296	44.86	18.76
-	Brussels Sprouts	7.05	8.65	351	33.14	23.80
8	Fettuccini Alfredo	7.01	7.17	361	48.46	8.53
-	Braised Beef & Noodles	7.01	7.91	408	27.74	22.21
-	Bread Pudding	7.01	8.37	287	ന	31.10
-	Tomato Juice	6.97	8.95	460	16.36	27.20
2	Harvard Beets	6.95	10.10	231	æ	24.69
_	Pigs Feet	O	10.19	251	39.32	29.84
-	Peanut Soup	O	8.44	47	4.	17.80
<del></del>	Asparagus	8	8.34	355	4	22.91
-	Corn Fritters	6.82	8.26	260	8	21.82
_	Meat Loaf	6.81	7.84	618	ı.	23.56
-	Cauliflower au Gratin	6.71	7.65	247	47.36	22.31
-	Tomato Soup	6.70	7.83	433	0	31.79
-	Spinach	6.64	8.51	485	16.39	24.10

					PERCENT	PERCENT
LIST	ITEM	MEAN	SD	Z	<b>NEVER TRIED</b>	MISSING
2	Tuna Noodle Casserole	6.61	8.33	555	11.29	22.56
-	Sardines	6.57	8.85	314	26.51	34.92
7	Chicken Ala King	6.55	9.35	445	14.11	32.88
-	Corned Beef	6.44	8.04	458	15.92	27.83
2	Stewed Prunes	6.42	9.34	177	56.90	22.02
-	Stewed Tomatoes	6.38	9.07	299	33.90	29.37
-	Lyonnaise Carrots	6.19	7.69	126	67.22	17.28
<b>,</b>	Lima Beans	6.14	7.62	468	14.85	27.69
-	Cooked Cabbage	6.03	7.43	523	9.05	26.74
-	Fettuccini Alfredo	5.88	6.24	317	47.87	13.24
-	Ratatouille	5.85	6.75	4	73.96	8.23
-	Spinach Salad	5.64	7.61	270	44.13	22.73
-	Quiche Lorraine	5.48	7.57	4	68.14	14.16
-	Chop Suey	5.45	7.06	445	25.56	19.85
7	Buttermilk	5.45	8.68	0	36.32	27.79
-	Green Pea Soup	5.03	7.89	275	40.92	25.28
-	Tuna Noodle Casserole	5.02	6.64	N	12.59	23.07
-	Corned Beef Hash	4.58	7.20		12.16	27.05
<del></del>	Beef & Corn Pie	4.58	6.07	0	40.74	21.58
-	Buttermilk	4.39	8.13	326	31.98	28.00
ᅮ.	Mincemeat Pie	4.36	7.10	0	55.11	19.47
7	Braised Liver w/Onions	4.07	6.56	485	17.45	24.75
-	Dried Dates	3.57	6.37	293	41.70	22.36
-	Stewed Prunes	3.41	6.75	151	60.48	21.03

Appendix G. Food Preference Survey Questionnaire

#### FOOD PREFERENCE SURVEY

#### INSTRUCTIONS FOR THE FOLLOWING QUESTIONS:

READ EACH QUESTION CAREFULLY. MARK YOUR ANSWER BY FILLING IN THE SQUARE (S) BESIDE THE CORRECT ANSWER. SOME OF THE QUESTIONS WILL ASK YOU TO FILL IN MORE THAN ONE ANSWER.

Proper Mark	
USE A NO. 2 PENCE ONLY	
1. WHAT IS YOUR RANK?  1 2 3 4 5 6 7 8 9  E O WO WO  2. WHAT IS YOUR SEX?  3. WHAT IS YOUR AGE  PEMALE  YEARS	-
4. HOW LONG HAVE YOU BEEN IN THE ARMED SERVICES?  5. WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED?	
O-2 YEARS  SOME HIGH SCHOOL  6-10 YEARS  HIGH SCHOOL GRADUATE OR GRADUATE EQUIVALENCE  11-15 YEARS  SOME COLLEGE  COLLEGE GRADUATE  MORE THEN 20 YEARS	ΣY
6. WHAT IS YOUR RACE/ETHNIC BACKROUND?  WHITE (NOT HISPANIC)  BLACK  HISPANIC  ASIAN/PACIFIC ISLANDER  AMERICAN INDIAN/ALASKAN NATIVE  OTHER (PLEASE SPECIFY)	
7. PLEASE INDICATE WHERE YOU HAVE LIVED THE LONGEST.  MIDDLE ATLANTIC (NY NJ PA)  EAST NORTH CENTRAL (OH IN IL MI WI)  EAST SOUTH CENTRAL (KY TN AL MS)  WEST SOUTH CENTRAL (AR LA OK TX)  PACIFIC (WA OR CA AK HI)  DO NOT WRITE BELOW THIS LINE	
0 1 2 3 4 5 6 7 8 9 S1	

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Page L2-P1

8. WHAT TYPE OF COOKING OR SPE- INDICATE YOUR TOP THREE CHO		FOOD DO YOU	like best? Fro	m the list belo	w. O
CHINESE FAST FOOD (HAMBURGERS, E FRENCH GENERAL AMERICAN STYLE GERMAN GREEK & MIDDLE EASTERN INDIAN & SOUTHEAST ASIAN		ITALIAN JAPANESE JEWISH MEXICAN NATURAL FOO POLISH & EAS	ods Stern European	VEGETARIA OTHER	OT MEXICAN)
9. FROM YOUR EXPERIENCE WITH B PROVIDE THE FOLLOWING FOOD					
	MUCH MORE OFTEN	MORE	AS OFTEN	Somewhat Less Often	Much Less Often
CASSEROLES					
VEGETARIAN DISHES	$\vdash$	H	H	H	H
BREADED & FRIED FOODS	H	H	H	H	
SEAFOOD	H		H	H	
WHOLE GRAIN CEREALS	H			H	H
COOKED VEGETABLES					
SOUPS					
DESSERTS					
Fresh fruits					
POULTRY					H
LOW FAT FOODS					
RED MEATS					П
REDUCED CALORIE FOODS					
PASTA				П	
RAW VEGETABLES	П				
LOW SALT FOODS					
SANDWICHES	П		П	П	
DIET BEVERAGES	П	П	П		
DAIRY PRODUCTS, NOT LOW FA	1 T		П		П
NATURAL/ORGANIC FOODS					
ETHNIC FOODS					
BROILED FISH					
NATURAL FOODS					
DIET BEVERAGES					
LOW/NO FAT DAIRY PRODUCTS					
HIGH FIBER FOODS					
REDUCED SUGAR FOODS					. []
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SURVEY NETWORK™

Form Number 75020-5-72

#### FOOD PREFERENCE SURVEY INSTRUCTIONS

Your response to this survey will help menu planners and dietitians provide the foods you want to eat on your ration menus. THIS IS NOT A TEST. We are interested in your opinions and yours only, so please do not compare your answers with anyone while the survey is in progress.

On the following pages we will ask HOW MUCH you like or dislike and HOW OFTEN you want to eat various foods. Please consider each food in a GENERAL WAY rather than any particular time you have eaten it.

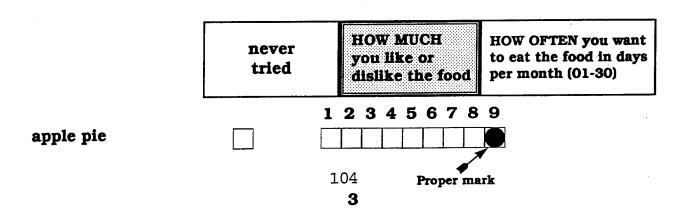
To answer the survey, proceed as follows.

- 1. Look at the food name and decide whether you are familiar with or have tried it.
- 2. If you are not familiar with or have never tried the food, darken the square in the "never tried" column and go on to the next food.
- 3. If you are familiar with or have tried the food, decide how much you much you like or dislike it and fill in one square under "how much you like or dislike the food" heading. To say how much you like or dislike a food, look at the rating scale and the example below.

#### RATING SCALE

1	2	3	4	5	6	7	8	9
Dislike Extremely	Dislike Very Much	Dislike Moderately	Dislike Slightly	Neither Like Nor Dislike	Like Slightly	Like Moderately	Like Very Much	Like Extremely

Note that the rating of 5 on the above scale is <u>neutral</u> and means that you <u>neither like</u> <u>nor dislike</u> a food. Ratings below 5 indicate degrees of <u>disliking</u>, and ratings above 5 indicate degrees of <u>liking</u>. In the example below, if you wanted to say "Like Extremely" for Apple Pie, you would make a round mark inside the square under the "9" column.



#### CONTINUED

4. After you have said how much you like or dislike a food, continue to the right to the two columns labelled HOW OFTEN you want to eat the food. Decide how many days per month you want the food on the menu. In the example below, if you want Apple Pie 5 times per month, you would make a round mark under "0" in the lefthand column and under "5" in the righthand column; or, if you want Pound Cake 10 times per month, you would mark "1" in the lefthand column and "0" in the righthand column.

		never tried	like or dislike	HOW OPTEN you want to eat the food in days per month (01-30)
			0 1 2 3 (	0 1 2 3 4 5 6 7 8
apple pie pound cake				

- 5. It may be that you never want a food even though you like or dislike it to some degree.

  If so, make marks under "0" in both columns. Or, you may want a food on the menu every day or more than once a day. In these cases, mark a "3" in the lefthand and a "0" in the righthand column.
- 6. Remember, if you are not familiar with a food, mark the first column marked never tried and leave the other columns blank. If you are familiar with the food, then first rate

  HOW MUCH you like or dislike the food, then indicate HOW OFTEN you want to eat the food.

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